राष्ट्रीय प्रौद्योगिकी संस्थान,राउरकेला
NATIONAL INSTITUTE OF TECHNOLOGY, ROURKELA

110th MEETING OF THE SENATE
[Through MS TEAM]

Date	:	27th December 2021 (Monday)
Time	:	04.00 PM

MINUTES

Senate-110[2021]-01: Welcome to the members and invitees by the Chairman, Senate.

The Director and Chairman, Senate welcomed all members and invitees to the meeting. Leave of absence was approved for all members/Invitees who were not present.

A. RULES, PROCEDURES, CURRICULA AND POLICY MATTERS :

Senate-110[2021]-02: Introduction of new Elective Courses in MN Deptt.

Chairman, Curriculum Development Committee forwarded the recommendation of DAC, MN Deptt. for introduction of three new Elective Courses from Spring Semester of AY 2021-22.

The Senate approved the recommendation of DAC (MN).
[Annexure – A1, Page No.10 - 17]

Senate-110[2021]-03: Starting of classes for Spring 2021-22.

As decided by the Senate, the Semester registration and starting of classes for Autumn 2021-22 (except 1st year UG programmes) were scheduled on 6th and 9th August 2021 respectively and the End-Semester examination was held during Dec. 5 -12, 2021. Now with the approval of Director it was decided that the Semester registration and starting of classes for **Spring** Semester 2021-22 (except 1st year UG programmes) will be done on 3rd and 4th January, 2022 respectively.

The Senate ratified the approval of Director.

[Annexure – A2, Page No.18 - 19]

B. UNDERGRADUATE AND POSTGRADUATE STUDIES:

Senate-110[2021]-04: Publication of results of 3rd, 5th, 7th and 9th (9th for B. Arch, Dual Degree and Int. M.Sc.) Semester examinations of B. Arch, B. Tech, Dual degree B. Tech & M. Tech and Five year Integrated M.Sc. programmes and approval of the list of graduating B.Tech and Dual degree B.Tech & M.Tech students.

The results of 3rd, 5th, 7th and 9th (9th for B. Arch, Dual Degree and Int. M.Sc.) Semesters (Autumn - 2021-22) examination of B. Arch, B. Tech, Dual degree B. Tech & M. Tech and Five year Integrated M.Sc. programmes as recommended by the UGPEC were put up on the table by PIC, Examinations for approval of the Senate.

The Senate approved the results of 3rd, 5th, 7th and 9th (9th for B. Arch, Dual Degree and Int. M.Sc.) Semester (Autumn 2021-22) examination of B. Arch, B. Tech, Dual degree B. Tech & M. Tech and Five year Integrated M.Sc. programmes as recommended by the UGPEC.

The Senate also approved the results of Spring 2020-21 examination for all graduating students of B.Tech and Dual degree B.Tech & M.Tech programmes as recommended by UGPEC.

[Annexure – A3, Page No.20 - 81]

Senate-110[2021]-05: **Publication of results of 1st and 3rd semester examinations of M. Tech, M.Sc., MBA and MA programmes and approval of the list of graduating M.Tech students.**

. The results of 1st and 3rd semester (Autumn 2021-22) examinations of M. Tech, M.Sc., MBA and MA programmes as recommended by the PGPEC were put up on the table by PIC, Examinations for approval of the Senate.

The Senate approved the results of 1st and 3rd semester (Autumn 2021-22) examinations of M. Tech, M.Sc., MBA and MA programmes as recommended by the PGPEC.

The Senate also approved the results of Spring 2020-21 examination for all graduating students of M.Tech programme as recommended by PGPEC.

[Annexure – A3, Page No.20 - 81]

Senate-110[2021]-06: Appeal for repeating 1st year by Purushottam Kumar, Roll No. 420PH5078.

Purushottam Kumar, 420PH5078 was enrolled in Integrated M Sc (Physics) programme in the Academic Year 2020-21 and at the end of second semester he had secured 6.93 CGPA. However, his parents in an appeal dated 18/11/2021 stated that his studies were hampered due to COVID-19 conditions and related issues and requested to allow their son to repeat 1st year as he wants to perform better. As the 1st year classes were starting on 06/12/2021, their request was allowed by the Director subject to approval of the Senate.

The Senate deliberated on the matter but not approved the request of the parents of the student for repeating 1st year by their ward as it is not permitted by the Regulations.

[Annexure – A4, Page No.82 - 83]

C.   RESEARCH STUDIES:

Senate-110[2021]-07: Publication of Course work results of PhD and M. Tech (Res) students.

The Course work results of Autumn - 2021-22 examinations of PhD and M.Tech (Res) students, as recommended by PGPEC were put up on the table by PIC, Examinations for approval of the Senate.

The Senate approved the Course work results of Autumn 2021-22 examinations of PhD and M.Tech (Res) students, as recommended by PGPEC.

[Annexure – A3, Page No.20 - 81]

Senate-110[2021]-08: **Appeal of Partha Sarathi Majhi, 510BM604 for extension of studentship period (*Deferred item*).**

Partha Sarathi Majhi [510BM604] was enrolled for PhD programme on 19/08/2010 and had completed 8 years of admission on 18/08/2018. The Senate vide Resolution No. 2019-84-Senate-21 dated 07/06/2019 granted extension of his studentship upto 30/06/2021 on health grounds. As intimated by the student, due to Covid-19 pandemic and subsequent closure of the Institute for the students, he could not complete his experiments in time and has requested for extension of his studentship for submission of thesis for at least for 03 consecutive semesters. The DRC, considering the roadmap submitted by the student, recommended for extension of his studentship upto December 2022.

The Senate considered the recommendation of DRC and granted extension of his studentship upto 31/12/2022 and it was further decided that no further extension will be granted beyond the said date.

[Annexure – A5, Page No.84 - 106]

Senate-110[2021]-09:   **Appeal of P Ramakrishnan, 513CH3074 for extension of studentship period.**

P Ramakrishnan [513CH3074] was enrolled for PhD programme as a full time student on 07/01/2014 under the Supervision of Prof. Abanti Sahoo, CH and will complete 8 years of admission on 06/01/2022. As intimated by the student, due to Covid-19 pandemic he was out of campus and returned only in November, 2021. Further, his two papers are under review and some more time is required to get published. Hence he requested for extension of his studentship for six months. His request was recommended by the Supervisor.

The Senate considered this proposal alongwith the below Agenda Items Senate-110[2021]-10 and Senate-110[2021]-11 for extension of the studentship period of Research scholars. In partial modification of the decision taken vide Resolution No. Senate-103[2021]-07(5) dated 23/06/2021, the Senate permitted the extension of time period by one year for Registration Seminar and Thesis submission beyond the normal permissible period as applicable to Research scholars. Further, in all such cases of Registration Seminar of PhD students who are eligible for fellowship (both Institute and external), the same may be paid on the recommendation of DRC in relaxation of existing clauses of Regulations.

[Annexure – A6, Page No.107 - 108]

Senate-110[2021]-10:   **Extension of studentship period of Srihari Nayak, 513EE1047.**

Srihari Nayak [513EE1047] was enrolled for PhD programme as a full time student on 06/01/2014 under the Supervision of Prof. Sanjeeb Mohanty, EE and will complete 8 years of admission on 05/01/2022. As he didn't have a SCI journal publication, he was not in a position to deliver Synopsis seminar by due date. Therefore, the DRC recommended for extension of his studentship by another one year.

The decision as recorded at Item No. Senate-110[2021]-09 above.

[Annexure – A7, Page No.109]

Senate-110[2021]-11:   **Extension of time period for thesis submission.**

Aiswarya Dash [512CR1014] was enrolled for PhD programme as a full time student on 12/04/2013 and completed 8 years of admission on 11/04/2021. She had taken withdrawal w.e.f. 20/06/2017. The student has already given synopsis seminar on 25/05/2021. As stated by the student, she could not submit the thesis within 06 months as his family members had suffered from COVID and also she was suffering from slip disk. She requested for extension of

time period till February 2022 to submit her final thesis. The DSC recommended her request.

The decision as recorded at Item No. Senate-110[2021]-09 above.

Senate-110[2021]-12: **Appointment of second Co-Supervisor in respect of Mr. Garimella Jawahar Lal Nehru, 521CY6020**

Garimella Jawahar Lal Nehru [521CY6020] was enrolled for PhD programme in Chemistry Deptt. as a Project Scholar w.e.f. 02/09/2021 under the Supervision of Prof. Debayan Sarkar, CY with Prof. Nihar Ranjan Mishra, HS as Co-Supervisor. He is working in a CSR-RSP funded project wherein Prof. Sarkar is PI and Prof. Mishra along with Prof. Rama Chandra Pradhan, FP are Co-PIs. Now, the PI and Co-PIs have requested to appoint Prof. Pradhan as second Co-Supervisor of the student for purpose of PhD programme. As per Clause 4 of PhD Regulations, there can be maximum two Supervisors and in the case of two Supervisors, one will be called Principal Supervisor and the other Co-Supervisor. There is no such provision for three Supervisors (second Co-Supervisor) of a PhD student.

The *Senate did not approve the request for appointment of second Co-Supervisor.*

Senate-110[2021]-13: **Recommendation of DRC (ME) for admission of Mr. P B Manish Chandra Vinay to Executive PhD programme.**

Against the advertisement for admission to Executive PhD programme for Autumn 2021-22, the DRC, ME recommended the name of Mr. P B Manish Chandra Vinay, Deputy Director, National Productivity Council for admission. However, before publishing the selection result recommended by the department it was detected that the applicant was not satisfying the eligibility criteria as he secured CGPA of 6.14 in B Tech against the requirement of 6.5 (after allowing 0.5 relaxation from the requirement of 7.00 CGPA due to his experience as provided in the Regulations). Accordingly, his name was dropped from the selection list.

The DRC vide letter dated 17/08/2021 had recommended for consideration of his admission, which was reviewed by Dean (AC) and not approved. However, the DRC again recommended for consideration of his admission based on his vast experience, which would help the department to get good industrial experience in Quality Control.

The *Senate did not approve the recommendation of DRC.*

Senate-110[2021]-14: Results of Ph.D. and M. Tech.(Res) Examinations

The Senate confirmed the results of the following Ph.D students who were provisionally awarded degrees after 108th Meeting of the Senate on the approval of the Chairman, Senate:

01	ABHISEK MOHAPATRA	
	Roll No.	515PH2005
	RS/Faculty	RS
	Date of award of degree	10/11/2021

		Foreign Examiner	Prof. Jane Charlton, The Pennsylvania State University, US
		Indian Examiner	Prof. C. S. Stalin, Indian Institute of Astrophysics, Bengaluru
		Name of Supervisor	Prof. Ananta Charan Pradhan, PH, NIT Rourkela
		Thesis Title	Probing the Circumgalactic Medium with Quasar Absorption Lines
02	SAIKAT CHAKRABORTY		
		Roll No.	516CS1005
		RS/Faculty	RS
		Date of award of degree	10/11/2021
		Foreign Examiner	Prof. Ildar Farkhatdinov, Queen Mary University of London, UK
		Indian Examiner	Prof. Amit Acharyya, Indian Institute of Technology, Hyderabad
		Name of Supervisor	Prof. Anup Nandy, CS, NIT Rourkela
		Thesis Title	Effective Clinical Gait Analysis using Supervised Learning Techniques
03	SUMANTA SAHU		
		Roll No.	516CY1001
		RS/Faculty	RS
		Date of award of degree	10/11/2021
		Foreign Examiner	Prof. William A. Anderson, University of Waterloo, Canada
		Indian Examiner	Prof. Bhim Charan Meikap, Indian Institute of Technology, Kharagpur
		Name of Supervisor	Prof. Raj Kishore Patel, CY, NIT Rourkela
		Thesis Title	Polymeric Nanocomposite Materials for the Removal of Hexavalent Chromium
04	SUCHANDRA BOSE		
		Roll No.	513HS1005
		RS/Faculty	RS
		Date of award of degree	11/11/2021
		Foreign Examiner	Prof. Rory Donnelly, Management School University of Liverpool, UK
		Indian Examiner	Prof. K. B. L. Srivastava, Indian Institute of Technology, Kharagpur
		Name of Supervisor	Prof. Seemita Mohanty, HS, NIT Rourkela
		Thesis Title	Impact of Transformational Leadership on Organizational Identification of Employees : A 05Study in the Indian IT Sector
05	SUSHREE SATVATEE SWAIN		
		Roll No.	514EE1025
		RS/Faculty	RS
		Date of award of degree	11/11/2021
		Foreign Examiner	Prof. Fabrice Labeau, McGill University, Canada
		Indian Examiner	Prof. Nithin V. George, Indian Institute of Technology, Gandhinagar
		Name of Supervisor	Prof. Dipti Patra, EE, NIT Rourkela
		Thesis Title	Electrocardiogram Signal Analysis for Myocardial Infarction Detection and Reconstruction
06	SURESH CHALUVADI		
		Roll No.	511CH104
		RS/Faculty	RS
		Date of award of degree	16/11/2021
		Foreign Examiner	Prof. Sally Krigstin, University of Toronto, Canada
		Indian Examiner	Prof. Vinu R, Indian Institute of Technology, Madras
		Name of Supervisor	Prof. R, K, Singh, CH, NIT Rourkela
		Thesis Title	Studies on Dry and Wet Torrefaction of Sugarcane Bagasse to Maximize the Recovery of Sugars and Bioethanol Yield
07	PRATEEVA MAHALI		
		Roll No.	514CS1015
		RS/Faculty	RS
		Date of award of degree	16/11/2021
		Foreign Examiner	Prof. Kshirasagar Naik, University of Waterloo,

		Canada
	Indian Examiner	Prof. Susmita Ghosh, Jadavpur University, Kolkata
	Name of Supervisor	Prof. Durga Prasad Mohapatra, CS, NIT Rourkela
	Thesis Title	Optimization and Prioritization of Test Scenarios for Object-Oriented Systems using Soft-Computing Techniques
08	BYOMAKESH MAHAPATRA	
	Roll No.	514CS6020
	RS/Faculty	RS
	Date of award of degree	16/11/2021
	Foreign Examiner	Prof. Osman Yagan, Carnegie Mellon University; USA
	Indian Examiner	Prof. Rajiv Misra, Indian Institute of Technology, Patna
	Name of Supervisor	Prof. Ashok Kumar Turuk, CS, NIT Rourkela Prof. Sarat Kumar Patra, EC, NIT Rourkela
	Thesis Title	Strategies for Load Balancing in Multi-tenant 5G C-RAN Architecture
09	RACHNA DEVI	
	Roll No.	515CY1009
	RS/Faculty	RS
	Date of award of degree	16/11/2021
	Foreign Examiner	Prof. Muralee Murugesu, University of Ottawa, Canada
	Indian Examiner	Prof. Venkataramanan Mahalingam, Indian Institute of Science Education and Research Kolkata, West Bengal
	Name of Supervisor	Prof. V. Siva Kumar, CY, NIT Rourkela
	Thesis Title	Exploration of New Eu(III) Complexes and their Application in Light Emitting Diodes and Sensors: Combined Experimental and Theoretical Investigations
10	BIJAY KUMAR GUHA	
	Roll No.	516ER6006
	RS/Faculty	RS
	Date of award of degree	18/11/2021
	Foreign Examiner	Prof. Michel Mischina, California Institute of Technology, USA
	Indian Examiner	Dr. Varun Sheel, Physical Research Laboratory, Ahmedabad
	Name of Supervisor	Prof. Jagabandhu Panda, ER, NIT Rourkela Prof. Bhishma Tyagi, ER, NIT Rourkela
	Thesis Title	Martian Atmospheric Characteristics Associated with Dust Storms and Clouds Realized through Satellite Observations and MarsWRF
11	ALOK RANJAN MAHANANDA	
	Roll No.	514MN1001
	RS/Faculty	RS
	Date of award of degree	22/11/2021
	Foreign Examiner	Prof. Mustafa Kumral, McGill University, Montreal, Canada
	Indian Examiner	Prof. S. Gupta, Indian Institute of Technology (BHU) Varanasi
	Name of Supervisor	Prof. B. K. Pal, MN, NIT Rourkela
	Thesis Title	Identification of Spontaneous Heating in Large Coal Stockpiles and Its Protective Measures
12	DIANA PRADHAN	
	Roll No.	516PH1012
	RS/Faculty	RS
	Date of award of degree	22/11/2021
	Foreign Examiner	Prof. Wolfgang Sigmund, University of Florida, USA
	Indian Examiner	Prof. Pawan Kumar Kulriya, Jawaharlal Nehru University, New Delhi
	Name of Supervisor	Prof. Jyoti Prakash Kar, PH, NIT Rourkela
	Thesis Title	Rapid Thermal Synthesis of Molybdenum Disulfide

			Thin Films for Infrared Detectors
13	AKASMIKA PANDA		
		Roll No.	516MA3008
		RS/Faculty	RS
		Date of award of degree	27/11/2021
		Foreign Examiner	Prof. Francesco Petitta, Sapienza University of Rome, Italy
		Indian Examiner	Prof. Dwijendra Narain Pandey, Indian Institute of Technology, Roorkee
		Name of Supervisor	Prof. Debarjoyti Choudhuri, MA, NIT Rourkela Prof. Kishor Chandra Pati, MA, NIT Rourkela
		Thesis Title	A Study on Singular and Non-Singular Elliptic and Parabolic PDEs
14	TANUSHREE PATRA		
		Roll No.	514BM1002
		RS/Faculty	RS
		Date of award of degree	01/12/2021
		Foreign Examiner	Prof. Mario Binelli, University of Florida, USA
		Indian Examiner	Prof. Rahul Purwar, Indian Institute of Technology, Bombay
		Name of Supervisor	Prof. Mukesh Kumar Gupta, BM, NIT Rourkela
		Thesis Title	Cryopreservation of Testicular Cells and Tissues by Solid Surface Vitrification
15	RAJKUMAR BODDHULA		
		Roll No.	514CY6008
		RS/Faculty	RS
		Date of award of degree	02/12/2021
		Foreign Examiner	Prof. Heinz-Bernhard Kraatz, University of Toronto, Canada
		Indian Examiner	Prof. Rajneesh Misra, Indian Institute of Technology, Indore
		Name of Supervisor	Prof. Saurav Chatterjee, CY, NIT Rourkela
		Thesis Title	Synthesis and Characterization of Transition Metal- Main Group Cluster for Their Potential in Nanoparticle Synthesis and Catalytic Applications
16	BV RAMAGOURISURYA SUBRAMANYAM		
		Roll No.	514PH6006
		RS/Faculty	RS
		Date of award of degree	02/12/2021
		Foreign Examiner	Prof. Hany Aziz, University of Waterloo, Canada
		Indian Examiner	Prof. S Ramaprabhu, Indian Institute of Technology, Madras
		Name of Supervisor	Prof. Pitamber Mahanandia, PH, NIT Rourkela
		Thesis Title	Investigation of Performance and Stability of Organic Solar Cells Fabricated by Incorporating Carbon Nanostructures in Both Hole Transport and Active Layers
17	K VIJAY REDDY		
		Roll No.	516MM1001
		RS/Faculty	RS
		Date of award of degree	02/12/2021
		Foreign Examiner	Prof. Vikas Tomar, Purdue University, USA
		Indian Examiner	Prof. Somnath Bhattacharyya, Indian Institute of Technology, Madras
		Name of Supervisor	Prof. Snehanshu Pal, MM, NIT Rourkela
		Thesis Title	Molecular Dynamics Simulation of Deformation Behaviour during Nanoscale Rolling
18	SAI GOPAL RAYAGURU		
		Roll No.	515MA1015
		RS/Faculty	RS
		Date of award of degree	03/12/2021
		Foreign Examiner	Prof. Ken Ono, University of Virginia, Virginia
		Indian Examiner	Prof. Shanta Laishram, Indian Statistical Institute, New Delhi
		Name of Supervisor	Prof. Gopal Krishna Panda, MA, NIT Rourkela
		Thesis Title	Certain Sums, Products, Repdigits and Triples Associated with Balancing and Lucas-Balancing

			Numbers
19	NEHA JAIN		
	Roll No.		516LS1007
	RS/Faculty		RS
	Date of award of degree		03/12/2021
	Foreign Examiner		Prof. Raul Mendez Giraldez, National Institute of Environmental Health Sciences (NIEHS), USA
	Indian Examiner		Prof. Ritu Kulshreshtha, Indian Institute of Technology, Delhi
	Name of Supervisor		Prof. Bibekanand Mallick, LS, NIT Rourkela
	Thesis Title		New Insights into the Regulatory Functions and Mechanisms of Action of MicroRNA-197 Duo in the Pathophysiology of Human Fibrosarcoma
20	SANDULA PAVAN		
	Roll No.		516EC6004
	RS/Faculty		RS
	Date of award of degree		10/12/2021
	Foreign Examiner		Prof. Anup Basu, University of Alberta, Canada
	Indian Examiner		Prof. Sumantra Dutta Roy, Indian Institute of Technology, Delhi
	Name of Supervisor		Prof. Manish Okade, EC, NIT Rourkela
	Thesis Title		Compressed Domain Video Zoom Motion Analysis and Saliency Estimation
21	KISHALAY ADHIKARI		
	Roll No.		514SM3010
	RS/Faculty		RS
	Date of award of degree		20/12/2021
	Foreign Examiner		Prof. Amalesh Sharma, Texas A&M University, USA
	Indian Examiner		Prof. Biplab Datta, Indian Institute of Technology, Kharagpur
	Name of Supervisor		Prof. Rajeev Kumar Panda, SM, NIT Rourkela
	Thesis Title		Consumer Brand Engagement and Brand Loyalty: Catalyzing Effect of Brand Relationship Quality
22	MARIKUMAR.R		
	Roll No.		515CY6016
	RS/Faculty		RS
	Date of award of degree		21/12/2021
	Foreign Examiner		Prof. Paul Attfield, University of Edinburgh, United Kingdom
	Indian Examiner		Prof. K.R. Justin Thomas, Indian Institute of Technology, Roorkee
	Name of Supervisor		Prof. V. Siva Kumar, CY, NIT Rourkela
	Thesis Title		New Lanthanide based Inorganic Phosphors Intended for Solid State Lighting: Structure-Property –Correlations
23	ASSIRBAD BEHURA		
	Roll No.		516LS6013
	RS/Faculty		RS
	Date of award of degree		21/12/2021
	Foreign Examiner		Prof. Murugaiyan Gopal, Brigham and Women's Hospital and Harvard Medical School, USA
	Indian Examiner		Prof. Yogendra Singh, University of Delhi, Delhi
	Name of Supervisor		Prof. Rohan Dhiman, LS, NIT Rourkela
	Thesis Title		Mechanistic Insight on the Role of ESAT-6 in Modulating Host Defensive Pathways through MicroRNA-30a in Mycobacteria Infected Macrophages
24	KRISHANU GANGULY		
	Roll No.		516ME1002
	RS/Faculty		RS
	Date of award of degree		21/12/2021
	Foreign Examiner		Prof. J. K. Sinha, The University of Manchester, UK
	Indian Examiner		Prof. Abhijit Sarkar, Indian Institute of Technology, Madras
	Name of Supervisor		Prof. Haraprasad Roy, ME, NIT Rourkela

			Prof. Tarapada Roy, ME, NIT Rourkela
		Thesis Title	Modelling and Analysis of Various Issues in Viscoelastic Composite Rotors
25	JAGATPATI RAIGURU		
		Roll No.	514EE1013
		RS/Faculty	RS
		Date of award of degree	22/12/2021
		Foreign Examiner	Prof. Yoshitaro Nose, Kyoto University, Japan
		Indian Examiner	Prof. Parameswar K. Iyer, Indian Institute of Technology, Guwahati
		Name of Supervisor	Prof. Pitamber Mahanandia, PH, NIT Rourkela Prof. Bidyadhar Subudhi, EE, Ex.- NIT Rourkela
		Thesis Title	Promoting Earth Abundant Semiconductor - CZTS as Hole Transporting Material for Perovskite Solar Cell Application

D. DISCIPLINE, ENDOWMENT AND STUDENT AFFAIRS: NIL

E. MISCELLANEOUS

Senate-110[2021]-15: Any other matter with permission of the Chair.

Item-1: Extension of studentship of Debashish Kar, 512CE1010 beyond 8 years.

Debashis Kar [512CE1010] was enrolled for PhD programme as a full time student on 22/04/2013 and the Senate vide Resolution No. Senate-108[2021]-19 approved for extension of his studentship up to 31/12/2021. As intimated by his Supervisor, his synopsis seminar is scheduled on 30/12/2021 and he needs some more time for submission of final thesis. It was recommended by the Supervisor and Chairman, DSC for extension of his studentship upto 31/03/2022.

The Senate decided to deal the recommendation as per decision recorded at Item No. Senate-110[2021]-09 above.

[Annexure – A11, Page No.123 - 125]

Item-2: Provisioning of one full semester for internship in respect of UG programmes (Deferred item).

A proposal had been received from Mr. Aditya Tripathi, the student invitee to the Senate for providing of one full semester for internship in respect of UG programmes. The Senate deliberated the proposal and constituted the following committee to explore the possibility of recasting of existing curriculum for UG students to make themselves free from any other academic obligations in 8th semester and be available for their internship:

1)	Dean (AC)	-	Chairman
2)	Dean (SW)	-	Member
3)	Assoc. Dean (AC)	-	Member
4)	Chairman, Curriculum	-	Member
5)	PIC (Exam)	-	Member

The recommendation of the committee will be put up to the Senate for consideration.

The meeting ended with thanks to the Chair.

(Prof. R. Dhiman)
Registrar & Secretary, Senate

(Prof. C. K. Sahoo)
Director & Chairman, Senate (I/c)

Prof. S. Mishra
Dean, Acad, NIT-Rourkela
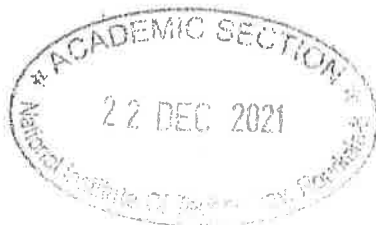
ACADEMIC SECTION
2 2 DEC 2021

Date: 21/12/2021

Sub: Recommendation for provisional approval of three new elective papers; MN5244, MN5246 and MN6124 from the Mining Department.

Please find the proposal for three new elective courses as mentioned above from the HOD, Mining. The department wants generously to offer the papers from ensuing spring semester 2022.
Professor R. Dinda, PIC, Curriculum development committee is out of station, hence, regular meeting is not possible.
I found the proposal in order; and discussed the matter with Director Sir over telephone (Mobile).
Provisional approval may be given for course upload and teaching, confirmation is subject to the approval of the Senate.
This is for your kind consideration and comment.

Sincerely yours,

21/12/2021

Samir K Patra
[Chairman, Curriculum Development Committee]

May be put up to
Senate –

24-12-2021
Director (I/C)

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NATIONAL INSTITUTE OF TECHNOLOGY
ROURKELA – 769 008

No.: NITR/MN/HOD/2021/M/0791   **FTS- 5134 S**   Date: 21.12.2021

Prof. S K Patra
Chairman, CRAC
NIT Rourkela

Sub: Proposal to approve new Elective Courses /papers

Six new faculty members have joined our Department after the last recruitment. In order to utilize their expertise, the following **three elective courses** are proposed to be introduced from the even semester of 2021-22:

SI No.	Couse Code	Subject Name	LT-P-Credits	Remarks
1.	MN5244	Coalbed Methane and CO_2 Sequestration	3-0-0-3	To replace the existing course of Coal Bed Methane with the same course code
2.	MN 5246	Mine Waste Management	3-0-0-3	New course
3.	MN6124	Design of Underground Structures	3-0-0-3	New course

The Department Academic Committee has reviewed the proposals in a meeting held on 20.12.2021 and recommend them to be included in the curriculum with effect from the Spring semester of 2021-22. The detailed syllabus for each of the course is attached herewith.

Submitted for your consideration and kind approval so that the courses will be uploaded in Nitris portal for registration by the students for the Spring semester of 2021-22.

Prof. S Ram   Prof S Bhowmik   Prof F Sarkar   Prof M Shriwas   Prof. R M Bishwal
                                                                                                    on leave

Prof. T Gupta   Prof. D S Nimaje   Prof. A K Gorai   Prof. H K Naik   Prof. M K Mishra
                                                                                                    on leave

Prof. S Jayanthu   Prof D P Tripathy   Prof. B K Pal   Prof. H B Sahu
                                                                      Chairman/DAC
                                                                      and HOD

Prof R.M. Bishwal and Prof. M.K. Mishra were present in in the meeting through MS Team

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MN 5244 COALBED METHANE AND CO₂ SEQUESTRATION   3-0-0 Credits

Course Teacher: Prof S Bhowmik

Pre-requisite: Mining Geology

Target Department: Mining Engineering, Chemical Engineering, Earth Sciences

Course Objectives:
1. To familiarize the student with different conventional and unconventional reservoirs.
2. To know the various parameters important for gas storage and gas transport through coal.
3. To understand the field design aspects and sensitivity analyses for a CBM reservoir.

Course Outcome:
CO1: Identify and understand the concepts of coal bed methane and gas recovery.
CO2: Analyze reservoir parameters and their correlations for gas-in-place and fluid flow.
CO3: Know about the field design concepts for the production and gas recovery.

Detailed Syllabus

Module 1: 3 classes
Coal and Energy: Introductory concepts, Conventional and unconventional reservoirs: Types and their differences, salient features.

Module 2: 10 classes
Coalbed methane (CBM): Coal - reservoir and source, primary and secondary porosity, pore distributions, adsorption, diffusion and fluid flow fundamentals, production and recovery.

Module 3: 13 classes
Gas storage capacity and Fluid flow: Key factors, detailed discussions, associated tests, gas-in-place and gas content analysis, sorption time, permeability and shrinkage/swelling effects. Desorption canister studies, Uncertainty analysis, Case studies and numerical problems.

Module 4: 10 classes
Carbon Capture and Storage (CCS): Fundamentals, CCS options, geological sequestration technologies, ECBM and CO₂ Sequestration: Importance, associated problems. Breakthrough analysis, Field drillhole pattern/design, cyclic, non-cyclic injections, numerical problems, Reservoir Simulation.

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Essential Reading:

1. Tarek Ahmed, Reservoir Engineering Handbook, 4th Edition, Gulf Professional Publishing (Elsevier), 2010
2. Gas Research Institute (GRI), A guide to Coalbed Methane Reservoir Engineering, GRI, Chicago, Illinois, USA, GRI Reference No. GRI-94/0397, 1996.

Supplementary Reading:

1. Fundamentals of Coalbed Methane Reservoir Engineering by John Seidle, PennWell Books, 2011. ISBN-10: 1593700016, ISBN-13: 978-1593700010, 401 pages.
2. Gas Research Institute (GRI), Coalbed Reservoir Gas-in-Place Analysis, A Short Course Published by GRI, Chicago, Illinois, USA, GRI Reference No. GRI-97/0263, 1996.

MN 5246 Mine Waste Management L-T-P: 3-0-3 , credits: 3

Course Teacher: Prof R M Bishwal

Pre-requisites: Surface Mining, Mining Geology

Target Departments: Mining Engineering/Civil Engineering

Course Objective:

1. To learn about various types of waste and tailings from mines.
2. To understand the design and stability aspects of the dump slopes in opencast mines.
3. To know about the various factors for characterization and monitoring of waste and tailings dams.

Course Outcome:

CO1: Understand the nature and types of bulk waste generated during mining

CO2: Comprehend and explain the influence of sound waste management strategy in mining operation

CO3: To familiarize with different design & operational aspects on mine waste and tailing dams

CO4: Plan, design and undertake stability assessment of a basic mine waste dumps.

CO5: Comprehend and be able to understand the nature and risk involved in tailing dams.

CO6: Understand the requirement of sustainable closure of WRDs & TSFs

Modules	Description
Module1	**Basic introduction** to Terminologies, Sources, Nature and Characteristics of different types of waste generated during mining. **Types of waste dumps**: Based on i) material types, ii) construction method iii) overall configuration and topographic constraints iv) Location (Internal/External) v) Geo-chemical properties. Method of design & construction. Introduction to Life of mine (LoM) mine waste management plans and handling strategy
Module 2	**Mine Waste Rock Dumps (WRDs):** Nature and Type of coarse waste generated from surface mines. Methods and Practices of overburden waste handling, management and storage in open cast and open pit mines. Waste sources and management in underground mines **Handling & Transportation of waste rocks**: Methods, Techniques (dumper/draglines), Cost-benefit analysis, Dumping methods (top-down/bottom-up)
Module 3	**Tailing Storage Facilities (TSFs):** Key Terminologies, Sources of mine tailings, Physical & Chemical properties. Mode of tailings material handling (slurry transportation) **Type of TSFs**: Upstream/Downstream/Centreline/Modified centreline **Washery rejects**: Types, Nature and Characteristics of washery rejects, fly ash/bottom ash **Basic design principle** of Tailing dams and ash pond/dykes, Governing standards and Indian regulations

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Module 4	Site selection & Material characterization for waste dumps and tailing dams: factor affecting site selection, site investigation and material testing (physical, geotechnical, geochemical) in WRDs & TSFs, sample collection, testing and analysis
	Stability assessment in mine waste & tailing dams: Different modes of failures in waste dumps and tailing dams, Risk assessment and hazard classification
	Stability analysis: Acceptance criteria, Stability requirement and risk involved. Numerical techniques and methods for stability assessment, Dam Run-out/Breach modelling
	Instrumentation and monitoring in WRDs & TSF structures: Requirements, Types, Advantages and Limitations, Introduction to state-of-the-art monitoring practices
Module 5	Re-use and utilization of mine waste: Possible re-use of mine waste for civil, domestic purpose, notable examples of waste to wealth (India & Abroad). Tailing re-mining practices.
	Closure of WRDs and TSFs: Closure requirements (technical/environmental), Reclamation at waste dumps, Short-to-long-term environmental challenges and mitigation.

Essential Reading:

1. *P. Mark Hawley, John Cunning,* **Guidelines for Mine Waste Dump and Stockpile Design**, CRC Press, 2017, ISBN 9781138197312
2. *Vick, Steven G.,* **Planning, Design, and Analysis of Tailings Dams,** BiTech Publisher, 1990, ISBN 0-921095-12-0

Supplementary Reading:

1. *Lottermoser, Bernd,* **Mine Wastes**-Characterization, Treatment and Environmental Impacts, Springer, 2010, ISBN 978-3-642-12418-1
2. *Geoffrey E. Blight,* **Geotechnical Engineering for Mine Waste Storage Facilities**, CRC Press, 2010, ISBN 9780367577216

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MN6124   **Design of Underground Structures L-T-P: 3-0-0, Credits: 3**

Pre-requisites: **Underground Coal Mining, Rock Mechanics**

Course Objectives
1. To understand the newly design approaches for different structures of underground mines for safe and efficient extraction of coal.
2. To understand design of recent advancement in applied support system for underground mining.
3. To understand strata mechanics during pillar extraction.

Course Outcomes
1. It will provide knowledge to students for suitable design of different underground structures during semi-mechanised and mechanised workings in underground coal mine.
2. Students will be familiar with the recent developed technologies including applied support for underground coal mining.

Module 1
Natural support: Design of rhombus and inclined coal pillar. Geological and geometric factors involved in design of natural supports. Design of fender/rib/snook. Roof-coal pillar interaction. Application of numerical modelling for design of the natural supports.

Module 2
Applied support: Support systems for continuous miner based mechanised workings and longwall working. Active and passive support, Failure mechanism of roof/cable/flexi bolts. Short Encapsulation Pull-out Test (SEPT) for resin grouted rock bolts. Application of numerical modelling for design of the applied supports.

Module 3
Roadways: Cut-out distances during continuous miner based working, Factors affecting the design of roadways- Depth of cover, in-situ stress conditions, nature of over- and under-lying strata, gradient of coal seam, orientation of geological discontinuities, etc., Applicability of continuous miner and bolter miner.

Module 4
Goaf behaviour: Caving characteristics of overlying strata, Caveability Index, Roof falls, Line of extraction, Induced stress driven fracturing/spalling in natural supports. Bulking factor of overlying strata and its significance, Caving angle, Angle of draw, Induced stress management, Estimation of active mining zone during depillaring operations.

Essential reading
1. J.M. Galvin, Ground Engineering - Principles and Practices for Underground Coal Mining. Springer International Publishing AG Switzerland, 2016.
2. S.S. Peng, Longwall Mining, 3rd Edition, published by CRC Press, 2021,

Supplementary reading

1. John A. Hudson and John P. Harrison, Engineering Rock Mechanics- An introduction to the principles. Published by Elsevier, 2007.

2. R.D. Singh, Principles & Practices of Modern Coal Mining, New age international New Delhi, 1997.

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National Institute of Technology Rourkela

No. NITR/AC/UG&PG/2021/M/   Dt. 24.12.2021

NOTICE

[ALL CONCERNED ARE REQUESTED TO READ THE INSTRUCTIONS CAREFULLY AND COMPLETELY]

Sub: Semester registration & commencement of classes for UG (except 1st year), PG & Research Programmes for Spring semester 2021-22.

It is for the information of all concerned that the **Semester registration for Spring Semester 2021-22 of all UG (except 1st year), PG & Research programmes has been fixed on 03.01.2022. The Pre-registration of all UG (except 1st year) & PG students will be done from 30.12.2021 to 31.12.2021.** Students failing to register on the scheduled date are permitted for registration till **17.01.2022** with a late registration fee of Rs. 500/-. **Normally no late registration is allowed beyond 10 working days from the scheduled date.** However, under exceptional cases, the Director on the recommendation of Associate. Dean (AC)/Dean (AC) can permit late registration with payment of the late fee.

Online Classes for all programmes (except UG 1st year) will start from 04.01.2022

All students are required to submit duly signed online registration form in their department **IN PERSON** positively after returning to the Institute.

IMPORTANT: The payment link for the semester registration fee will be shared shortly. Kindly keep checking your mail.

All students and faculty advisors are requested to go through the summarised regulation (**B.Tech., B.Arch., Int.M.Sc. (5 yr), B.Tech. M.Tech. Dual Degree (5 yr) Summarized**) (para 5) carefully which is available on the institute website under the following link;

https://nitrkl.ac.in/Academics/AcademicProcess/Academic-Regulations/

Before attempting the Registration process, each student should ensure the following during the **Pre-registration process**:

❖ Subject details including **Backlog, X, and UR papers** are to be **duly verified by the Faculty advisor** of the concerned batch of students with respect to the regulations.

❖ **Every student has to complete the pre-registration process successfully.** For students who have not done pre-registration due to some reason (clash of the time slot or any other reason), should submit an online request to the concerned Faculty Advisor before **31.12.2021**. Students

facing any other technical difficulty in pre-registration are advised to resolve the issue[s] between **30.12.2021 to 31.12.2021** through e-mail intimation to their concerned faculty advisor.

❖ If any issue cannot be resolved by the faculty advisor, then they are requested to forward a consolidated list of students (hard copy) to the academic office with their recommendations and email the softcopy to **acad.ug@nitrkl.ac.in** with a copy to **mishran@nitrkl.ac.in** before **31.12.2021**.

❖ Once registered, a student may amend his/her registration within **10 working days** of the original registration date i.e. latest by **17.01.2022**.

❖ A student is required to appear in both mid-semester and End-semester examinations for each paper registered for the Spring semester 2021-22. Under no circumstances, a student will be allowed to write an examination if he/she has not registered for a paper.

❖ Students are advised to consult their concerned Faculty Advisors in advance for any complications in their registration and devise a plan before **30.12.2021** to escape administrative worries and ensuing loss in attendance. **This applies to all those students who have more number of Backlog or UR or X courses [Theory, Lab & Research Project] and those who are in 10th [B. Tech], 12th [Integrated M. Sc.], 6th [M. A/M. Sc/M. Tech/MBA] & above semesters.**

❖ Students are requested to refrain from any other mode of communication except the above-specified ones viz; emails/phone calls/Whatsapp/text messages to the higher authorities/other functionaries. **Such communications will not be entertained and will lead to further delay in resolving the problems as they cannot be registered/tracked at our end. This may please be noted that faculty advisors are the only contact point for students to facilitate their Semester Registration.**

NOTE:

For any pre-registration/registration-related query, you may please contact your faculty advisor. In case of any other technical issue write an email (preferable mode of communication) or contact AR, Academics (UG& PG) as per the following details:

Smt. S. Sahoo, AR (UG&PG);

email: acad.ug@nitrkl.ac.in.

Student helpdesk number: **+91 661 2462038**

This is issued with the approval of the competent authority.

Sd/-
Asst. Registrar
(Academic-UG&PG)

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No. NITR/AC/2021/M/0655   Date: 24-Dec-2021
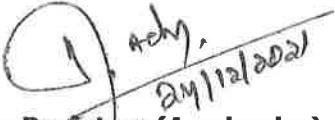
Minutes of 67th UGPEC & 69th PGPEC meeting held at 04.00 PM on 24th December, 2021 (Friday) in hybrid mode (Physically in Board Room and through MS-Team Virtually)

The 67th UGPEC & 69th PGPEC meeting was held on **24th December, 2021** in hybrid mode (Physically in Board Room and through MS-Team Video Conferencing) in the presence of Chairperson, Institute Quality Assurance Cell (IQAC).

The Committee went through the grade statistics of students of all Departments for End Semester Autumn 2021-22 Examinations and recommended to the Senate for kind consideration:

Agenda Discussion-1: Recommendation of Results of End-Semester Examinations, Autumn 2021-22 for UG, PG and Research Programmes.

> The committee recommended results of **End-Semester Examinations, Autumn 2021-22 for UG, PG and Research Programmes** to the Senate for approval.

Deputy Registrar (Academics)
& Member Secretary UGPEC & PGPEC

Dean (Academic)
& Chairman UGPEC & PGPEC

National Institute of Technology Rourkela

Grade Statistics of B.Arch., B.Tech.,Dual Degree, Int.M.Sc, M.Tech, M.Sc, MBA, MA, M.Tech (Res) & Ph.D
[End-Sem Examination Autumn 2021-22]

GRADE STATISTICS REPORT (B.ARCH. : 2021-22 - AUTUMN : 3RD SEMESTER)   24-Dec-2021

AR : Architecture

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	PA2101	Architectural Design - II	0-0-6 : 4	20	2	7	6	1	3	0	0	0	1	0	0
2	CE2003	Mechanics of Solids	3-0-0 : 3	20	0	0	2	1	3	8	0	0	6	0	0
3	EE2400	Network Analysis	3-0-0 : 3	1	0	0	0	0	0	0	0	0	1	0	0
4	PA2303	Building Construction - II	3-1-0 : 3	20	1	9	5	3	1	0	0	0	1	0	0
5	PA2201	Architectural Graphics - III	0-0-3 : 2	20	3	3	5	4	3	1	0	0	1	0	0
6	PA2301	Building Construction Sessional - II	0-0-3 : 2	20	0	8	7	2	0	3	0	0	0	0	0
7	PA2501	Evolution of Architecture - III	3-0-0 : 2	20	0	7	6	4	2	0	0	0	1	0	0
8	PA2601	Building Services - I	3-0-0 : 2	20	4	7	4	4	0	0	0	0	1	0	0
9	PA2801	Climate-Responsive Architecture	3-0-0 : 2	20	0	1	7	8	3	0	0	0	1	0	0

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GRADE STATISTICS REPORT (B.ARCH. : 2021-22 - AUTUMN : 5TH SEMESTER)　　　24-Dec-2021

AR : Architecture

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
1	PA3101	Architectural Design - IV	0-0-9 : 6	44	0	10	16	10	6	0	0	0	2	0	0
2	CE3203	Reinforced Concrete Design	3-0-0 : 3	23	1	0	1	5	9	3	0	0	4	0	0
3	PA3001	Architectural Heritage Conservation	3-0-0 : 2	8	2	3	3	0	0	0	0	0	0	0	0
4	PA3003	Universal Design	3-0-0 : 2	14	1	5	2	1	5	0	0	0	0	0	0
5	PA3201	Working Drawing - I	0-0-3 : 2	23	7	3	5	3	1	2	0	0	2	0	0
6	PA3203	Computer Aided Design and Simulation - II	0-0-3 : 2	23	3	8	3	3	0	2	0	0	4	0	0
7	PA3801	Landscape Design	3-0-0 : 2	22	0	2	1	5	9	4	0	0	1	0	0
8	PA3901	Interior Design	0-0-3 : 2	23	0	4	10	5	0	3	0	0	1	0	0
9	PA3903	Housing	3-0-0 : 2	22	1	3	9	6	2	1	0	0	0	0	0
10	PA3205	Advanced Rendering Studio	0-0-2 : 1	22	1	10	4	1	2	3	0	0	1	0	0

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GRADE STATISTICS REPORT (B.ARCH. : 2021-22 - AUTUMN : 7TH SEMESTER)　　　24-Dec-2021

AR : Architecture

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
1	PA4101	Architectural Design - VI	0-0-9 : 6	15	2	5	2	1	3	2	0	0	0	0	0
2	PA4005	Energy Efficient Architecture	3-1-0 : 3	11	2	2	5	2	0	0	0	0	0	0	0
3	PA4007	Green Certification Systems	3-1-0 : 3	6	0	2	2	2	0	0	0	0	0	0	0
4	PA4011	Disaster Management and Mitigation	3-1-0 : 3	9	2	5	1	1	0	0	0	0	0	0	0
5	PA4013	Introduction to Urban and Regional Planning	3-1-0 : 3	5	0	0	1	3	1	0	0	0	0	0	0
6	PA4303	Advanced Building Construction	3-1-0 : 3	16	2	5	6	3	0	0	0	0	0	0	0
7	PA4301	Advanced Building Materials	3-0-0 : 2	16	2	4	6	4	0	0	0	0	0	0	0
8	PA4501	Project Management	3-0-0 : 2	16	2	5	4	3	1	1	0	0	0	0	0
9	PA4901	Academic Portfolio	0-0-3 : 2	16	2	5	5	3	0	1	0	0	0	0	0
10	PA4701	Seminar and Technical Writing - I	0-0-2 : 1	15	0	1	6	4	3	1	0	0	0	0	0

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GRADE STATISTICS REPORT (B.ARCH. : 2021-22 - AUTUMN : 9TH SEMESTER)

24-Dec-2021

AR : Architecture

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	PA5201	Architectural Thesis Research	0-0-6 : 4	18	0	9	8	1	0	0	0	0	0	0	0
2	PA5001	Architectural Documentation Studio	1-0-3 : 3	17	0	8	4	3	2	0	0	0	0	0	0
3	PA5003	Review of Contemporary Global Architecture	1-0-3 : 3	15	3	5	3	2	2	0	0	0	0	0	0
4	PA5101	Architectural Design - VII	0-0-5 : 3	18	0	3	6	8	1	0	0	0	0	0	0
5	PA5401	Advanced Structural Systems	3-0-0 : 2	18	0	4	9	5	0	0	0	0	0	0	0
6	PA5601	Advanced Building Services	0-0-3 : 2	18	3	9	4	2	0	0	0	0	0	0	0
7	PA5501	Professional Practice	2-0-0 : 1	17	3	9	4	1	0	0	0	0	0	0	0
8	PA5701	Seminar and Technical Writing - II	0-0-2 : 1	18	0	6	5	6	0	1	0	0	0	0	0

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GRADE STATISTICS REPORT (B.TECH. : 2021-22 - AUTUMN : 3RD SEMESTER)

24-Dec-2021

BM : Biomedical Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	BM2601	Analog and Digital Electronics for Bioengineers	3-1-0 : 4	46	4	9	15	16	2	0	0	0	0	0	0
2	BM2001	Medical Science I	3-0-0 : 3	45	1	24	19	1	0	0	0	0	0	0	0
3	BM2003	Medical Science II	3-0-0 : 3	45	6	17	14	7	1	0	0	0	0	0	0
4	BM2101	Cell and Molecular Biology	3-0-0 : 3	46	5	22	15	4	0	0	0	0	0	0	0
5	HS1317	Introduction to the Metaphysics of Sanskrit Language	3-0-0 : 3	7	1	0	2	2	0	1	0	0	1	0	0
6	HS1321	Introduction to Psychology	3-0-0 : 3	8	0	0	6	2	0	0	0	0	0	0	0
7	HS1331	Introduction to Society and Culture	3-0-0 : 3	19	0	6	11	1	0	1	0	0	0	0	0
8	HS1340	Principles of Economics	3-0-0 : 3	12	0	3	6	3	0	0	0	0	0	0	0
9	ME2261	Basic Manufacturing Processes	3-0-0 : 3	1	0	1	0	0	0	0	0	0	0	0	0
10	BM2701	Medical Science Laboratory	0-0-3 : 2	46	2	21	13	7	1	0	0	0	2	0	0
11	BM2703	Biochemistry and Microbiology Laboratory	0-0-2 : 1	46	5	26	8	4	2	1	0	0	0	0	0
12	EC2700	Basic Electronics Laboratory	0-0-2 : 1	46	4	29	11	1	1	0	0	0	0	0	0

BT : Biotechnology

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	BM2005	Biostatistics	3-1-0 : 4	36	1	14	10	9	2	0	0	0	0	0	0
2	BM2007	Biochemistry	3-0-0 : 3	36	4	22	7	3	0	0	0	0	0	0	0
3	BM2009	Microbiology	3-0-0 : 3	36	3	6	13	11	3	0	0	0	0	0	0
4	BM2101	Cell and Molecular Biology	3-0-0 : 3	36	4	21	8	3	0	0	0	0	0	0	0
5	EC2610	Fundamentals of Signals and Systems	2-1-0 : 3	1	0	0	1	0	0	0	0	0	0	0	0
6	HS1317	Introduction to the Metaphysics of Sanskrit Language	3-0-0 : 3	7	1	2	2	0	1	1	0	0	0	0	0

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
7	HS1321	Introduction to Psychology	3-0-0 : 3	2	0	0	0	2	0	0	0	0	0	0	0
8	HS1331	Introduction to Society and Culture	3-0-0 : 3	11	0	5	6	0	0	0	0	0	0	0	0
9	HS1340	Principles of Economics	3-0-0 : 3	16	2	2	6	6	0	0	0	0	0	0	0
10	PH2007	Electrostatics and Magnetostatics	3-0-0 : 3	1	0	0	1	0	0	0	0	0	0	0	0
11	BM2705	Cell and Molecular Biology Laboratory	0-0-3 : 2	36	4	17	12	3	0	0	0	0	0	0	0
12	BM2703	Biochemistry and Microbiology Laboratory	0-0-2 : 1	36	4	25	4	2	0	1	0	0	0	0	0
13	EC2700	Basic Electronics Laboratory	0-0-2 : 1	36	2	20	11	2	1	0	0	0	0	0	0

CE : Civil Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	MA2305	Numerical Analysis	3-1-0 : 4	89	11	38	31	9	0	0	0	0	0	0	0
2	CE2001	Civil Engineering Materials and Construction	3-0-0 : 3	89	2	20	34	32	1	0	0	0	0	0	0
3	CE2003	Mechanics of Solids	3-0-0 : 3	89	9	22	34	18	5	1	0	0	0	0	0
4	CE2005	Surveying	3-0-0 : 3	89	7	19	22	28	9	4	0	0	0	0	0
5	CS2061	Data Structure Applications and Algorithms	3-0-0 : 3	5	0	2	1	2	0	0	0	0	0	0	0
6	EC2610	Fundamentals of Signals and Systems	2-1-0 : 3	3	0	1	2	0	0	0	0	0	0	0	0
7	EE2400	Network Analysis	3-0-0 : 3	5	0	1	0	2	2	0	0	0	0	0	0
8	HS1317	Introduction to the Metaphysics of Sanskrit Language	3-0-0 : 3	3	1	1	0	0	1	0	0	0	0	0	0
9	HS1321	Introduction to Psychology	3-0-0 : 3	9	0	0	4	5	0	0	0	0	0	0	0
10	HS1331	Introduction to Society and Culture	3-0-0 : 3	33	2	6	16	9	0	0	0	0	0	0	0
11	HS1340	Principles of Economics	3-0-0 : 3	44	0	11	22	10	1	0	0	0	0	0	0
12	ME2261	Basic Manufacturing Processes	3-0-0 : 3	2	0	0	1	1	0	0	0	0	0	0	0
13	CE2701	Mechanics of Solids Laboratory	0-0-2 : 1	89	14	34	32	8	1	0	0	0	0	0	0
14	EE2700	Basic Electrical Engineering Laboratory	0-0-2 : 1	89	7	41	38	2	0	0	0	0	1	0	0
15	HS1270	Language Laboratory	0-0-2 : 1	87	7	51	19	9	1	0	0	0	0	0	0

CH : Chemical Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	CH2111	Fluid Dynamics	3-1-0 : 4	71	2	22	32	13	1	0	0	0	1	0	0
2	MA2305	Numerical Analysis	3-1-0 : 4	72	4	30	24	11	1	0	0	0	2	0	0
3	CH2211	Chemical Process Calculations	2-1-0 : 3	72	1	12	42	11	4	1	0	0	1	0	0
4	CH2411	Chemical Engineering Thermodynamics	3-0-0 : 3	72	0	1	12	50	8	0	0	0	1	0	0
5	CS2061	Data Structure Applications and Algorithms	3-0-0 : 3	4	0	0	3	1	0	0	0	0	0	0	0
6	EC2610	Fundamentals of Signals and Systems	2-1-0 : 3	2	0	0	1	1	0	0	0	0	0	0	0
7	EE2400	Network Analysis	3-0-0 : 3	2	0	0	0	2	0	0	0	0	0	0	0
8	HS1317	Introduction to the Metaphysics of Sanskrit Language	3-0-0 : 3	4	1	2	1	0	0	0	0	0	0	0	0
9	HS1321	Introduction to Psychology	3-0-0 : 3	9	0	1	4	3	0	1	0	0	0	0	0
10	HS1331	Introduction to Society and Culture	3-0-0 : 3	20	1	10	9	0	0	0	0	0	0	0	0
11	HS1340	Principles of Economics	3-0-0 : 3	38	1	5	20	10	2	0	0	0	0	0	0
12	ME2261	Basic Manufacturing Processes	3-0-0 : 3	6	0	3	1	2	0	0	0	0	0	0	0
13	PH2007	Electrostatics and Magnetostatics	3-0-0 : 3	4	1	2	1	0	0	0	0	0	0	0	0
14	CH2471	Biochemical Engineering Laboratory	0-0-3 : 2	72	0	39	16	6	5	5	0	0	1	0	0
15	CH2271	Process Technology Laboratory	0-0-2 : 1	72	3	43	23	3	0	0	0	0	0	0	0
16	EC2700	Basic Electronics Laboratory	0-0-2 : 1	72	19	24	21	3	2	2	0	0	1	0	0

CR : Ceramic Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	MA2203	Introduction to Probability and Statistics	3-1-0 : 4	48	6	25	15	2	0	0	0	0	0	0	0
2	CR2101	Materials Thermodynamics	3-0-0 : 3	47	1	2	5	15	23	1	0	0	0	0	0
3	CR2401	Unit Operations in Ceramic Processing	3-0-0 : 3	48	0	6	25	14	3	0	0	0	0	0	0
4	CR2403	Ceramic Raw Materials	3-0-0 : 3	47	0	5	17	20	5	0	0	0	0	0	0
5	EC2610	Fundamentals of Signals and Systems	2-1-0 : 3	4	0	3	0	1	0	0	0	0	0	0	0
6	EE2400	Network Analysis	3-0-0 : 3	3	0	0	1	1	0	0	0	0	1	0	0
7	HS1317	Introduction to the Metaphysics of Sanskrit Language	3-0-0 : 3	3	0	1	0	0	0	2	0	0	0	0	0
8	HS1321	Introduction to Psychology	3-0-0 : 3	3	0	0	2	1	0	0	0	0	0	0	0
9	HS1331	Introduction to Society and Culture	3-0-0 : 3	16	0	1	13	2	0	0	0	0	0	0	0
10	HS1340	Principles of Economics	3-0-0 : 3	26	0	5	16	5	0	0	0	0	0	0	0
11	ME2261	Basic Manufacturing Processes	3-0-0 : 3	1	0	0	1	0	0	0	0	0	0	0	0
12	MM2308	Iron Making and Steel Making	3-0-0 : 3	2	0	0	0	2	0	0	0	0	0	0	0

13	CR2410	Chemical Analysis Laboratory	0-0-3 : 2	48	2	20	14	11	1	0	0	0	0	0	0
14	CR2405	Unit Operations Laboratory	0-0-2 : 1	48	2	31	9	6	0	0	0	0	0	0	0
15	EC2700	Basic Electronics Laboratory	0-0-2 : 1	48	3	21	15	7	2	0	0	0	0	0	0

CS : Computer Science and Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	MA2203	Introduction to Probability and Statistics	3-1-0 : 4	169	18	57	63	19	8	1	0	0	3	0	0
2	CS2001	Digital System Design	3-0-0 : 3	169	5	17	93	41	10	1	0	0	2	0	0
3	CS2003	Discrete Structures	3-0-0 : 3	169	10	44	55	43	12	3	0	0	2	0	0
4	CS2005	Data Structures and Algorithms	3-0-0 : 3	169	3	13	42	57	38	13	0	0	3	0	0
5	EC2610	Fundamentals of Signals and Systems	2-1-0 : 3	9	0	0	0	0	0	0	0	0	9	0	0
6	HS1317	Introduction to the Metaphysics of Sanskrit Language	3-0-0 : 3	6	1	2	1	0	0	2	0	0	0	0	0
7	HS1321	Introduction to Psychology	3-0-0 : 3	14	0	1	10	3	0	0	0	0	0	0	0
8	HS1331	Introduction to Society and Culture	3-0-0 : 3	71	2	31	24	14	0	0	0	0	0	0	0
9	HS1340	Principles of Economics	3-0-0 : 3	78	1	14	42	14	4	1	0	0	2	0	0
10	ME2261	Basic Manufacturing Processes	3-0-0 : 3	1	0	0	0	0	0	0	0	0	1	0	0
11	MM2308	Iron Making and Steel Making	3-0-0 : 3	1	0	0	0	0	0	0	0	0	1	0	0
12	PH2007	Electrostatics and Magnetostatics	3-0-0 : 3	3	1	1	0	0	0	0	0	0	1	0	0
13	CS2071	Data Structure and Algorithms Laboratory	0-0-3 : 2	169	29	55	40	16	11	9	0	0	9	0	0
14	CS2073	Digital System Design Laboratory	0-0-3 : 2	169	32	45	41	24	10	10	0	0	7	0	0
15	HS1270	Language Laboratory	0-0-2 : 1	169	25	70	49	18	6	0	0	0	1	0	0

EC : Electronics and Communication Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	EC2001	Analog Electronics	3-1-0 : 4	76	0	13	28	30	5	0	0	0	0	0	0
2	MA2203	Introduction to Probability and Statistics	3-1-0 : 4	76	13	49	12	1	1	0	0	0	0	0	0
3	CS2061	Data Structure Applications and Algorithms	3-0-0 : 3	7	0	3	3	1	0	0	0	0	0	0	0
4	EC2005	Network Analysis and Synthesis	2-1-0 : 3	76	0	9	37	23	6	1	0	0	0	0	0
5	EC2601	Signals and Systems	2-1-0 : 3	76	7	36	23	10	0	0	0	0	0	0	0
6	EE2400	Network Analysis	3-0-0 : 3	3	0	2	0	1	0	0	0	0	0	0	0
7	HS1317	Introduction to the Metaphysics of Sanskrit Language	3-0-0 : 3	2	0	0	1	0	1	0	0	0	0	0	0
8	HS1321	Introduction to Psychology	3-0-0 : 3	3	0	0	1	2	0	0	0	0	0	0	0
9	HS1331	Introduction to Society and Culture	3-0-0 : 3	43	0	10	28	5	0	0	0	0	0	0	0
10	HS1340	Principles of Economics	3-0-0 : 3	27	0	5	17	5	0	0	0	0	0	0	0
11	ME2261	Basic Manufacturing Processes	3-0-0 : 3	1	0	0	0	0	0	0	0	0	1	0	0
12	MM2308	Iron Making and Steel Making	3-0-0 : 3	2	0	0	0	1	1	0	0	0	0	0	0
13	PH2007	Electrostatics and Magnetostatics	3-0-0 : 3	4	0	3	1	0	0	0	0	0	0	0	0
14	EC2703	Analog Electronics Laboratory	0-0-3 : 2	76	4	18	38	9	7	0	0	0	0	0	0
15	EC2701	Circuit Simulation Laboratory	0-0-2 : 1	76	6	25	39	3	3	0	0	0	0	0	0
16	EC2705	System Modelling and Design Laboratory	0-0-2 : 1	76	7	33	31	4	1	0	0	0	0	0	0

EE : Electrical Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	EE2001	Electrical Machines - I	3-1-0 : 4	131	10	24	35	38	13	10	0	0	1	0	0
2	CS2061	Data Structure Applications and Algorithms	3-0-0 : 3	4	0	0	2	1	0	0	0	0	1	0	0
3	EC2610	Fundamentals of Signals and Systems	2-1-0 : 3	4	0	3	1	0	0	0	0	0	0	0	0
4	EE2003	Electrical Measurement and Instrumentation	3-0-0 : 3	131	13	28	46	33	9	1	0	0	1	0	0
5	EE2401	Network Theory	3-0-0 : 3	131	2	12	14	47	38	17	0	0	1	0	0
6	EE2403	Analog Electronics	3-0-0 : 3	131	33	47	25	12	10	2	0	0	2	0	0
7	HS1317	Introduction to the Metaphysics of Sanskrit Language	3-0-0 : 3	11	0	3	1	4	1	1	0	0	1	0	0
8	HS1321	Introduction to Psychology	3-0-0 : 3	10	0	1	3	5	0	1	0	0	0	0	0
9	HS1331	Introduction to Society and Culture	3-0-0 : 3	58	0	20	35	2	1	0	0	0	0	0	0
10	HS1340	Principles of Economics	3-0-0 : 3	52	0	24	20	6	1	0	0	0	1	0	0
11	ME2261	Basic Manufacturing Processes	3-0-0 : 3	1	0	0	0	0	0	0	0	0	1	0	0
12	MM2308	Iron Making and Steel Making	3-0-0 : 3	1	0	0	0	0	1	0	0	0	0	0	0
13	PH2007	Electrostatics and Magnetostatics	3-0-0 : 3	2	1	0	0	0	0	0	0	0	1	0	0
14	EE2700	Basic Electrical Engineering Laboratory	0-0-2 : 1	132	9	29	44	27	13	5	0	0	5	0	0
15	EE2701	Electrical Network Simulation Laboratory	0-0-2 : 1	131	15	52	30	14	7	10	0	0	3	0	0
16	EE2703	Electrical Measurement and Instrumentation Laboratory	0-0-2 : 1	132	18	52	39	13	4	1	0	0	5	0	0

EI : Electronics and Instrumentation Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	EC2001	Analog Electronics	3-1-0 : 4	70	0	5	41	23	1	0	0	0	0	0	0
2	MA2203	Introduction to Probability and Statistics	3-1-0 : 4	70	20	44	6	0	0	0	0	0	0	0	0
3	CS2061	Data Structure Applications and Algorithms	3-0-0 : 3	4	0	1	2	1	0	0	0	0	0	0	0
4	EC2005	Network Analysis and Synthesis	2-1-0 : 3	70	1	2	38	27	2	0	0	0	0	0	0
5	EC2601	Signals and Systems	2-1-0 : 3	70	7	27	30	6	0	0	0	0	0	0	0
6	EE2400	Network Analysis	3-0-0 : 3	2	0	0	2	0	0	0	0	0	0	0	0
7	HS1317	Introduction to the Metaphysics of Sanskrit Language	3-0-0 : 3	3	0	0	1	2	0	0	0	0	0	0	0
8	HS1321	Introduction to Psychology	3-0-0 : 3	9	0	0	5	4	0	0	0	0	0	0	0
9	HS1331	Introduction to Society and Culture	3-0-0 : 3	25	0	4	15	5	1	0	0	0	0	0	0
10	HS1340	Principles of Economics	3-0-0 : 3	33	1	7	16	9	0	0	0	0	0	0	0
11	MM2308	Iron Making and Steel Making	3-0-0 : 3	1	0	0	0	1	0	0	0	0	0	0	0
12	PH2007	Electrostatics and Magnetostatics	3-0-0 : 3	2	0	1	0	1	0	0	0	0	0	0	0
13	EC2703	Analog Electronics Laboratory	0-0-3 : 2	70	1	15	34	18	1	0	0	0	1	0	0
14	EC2701	Circuit Simulation Laboratory	0-0-2 : 1	70	8	37	24	1	0	0	0	0	0	0	0
15	EC2705	System Modelling and Design Laboratory	0-0-2 : 1	70	8	24	32	6	0	0	0	0	0	0	0

FP : Food Process Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	MA2305	Numerical Analysis	3-1-0 : 4	36	1	13	11	8	1	0	0	0	2	0	0
2	EE2400	Network Analysis	3-0-0 : 3	1	0	1	0	0	0	0	0	0	0	0	0
3	FP2101	Food Chemistry	3-0-0 : 3	36	2	5	11	10	6	1	0	0	1	0	0
4	FP2103	Principles of Food Technology	3-0-0 : 3	36	0	1	7	13	10	4	0	0	1	0	0
5	FP2201	Food Processing Operations - I	3-0-0 : 3	36	3	23	5	3	0	1	0	0	1	0	0
6	HS1317	Introduction to the Metaphysics of Sanskrit Language	3-0-0 : 3	4	0	0	2	2	0	0	0	0	0	0	0
7	HS1321	Introduction to Psychology	3-0-0 : 3	8	0	0	3	4	0	1	0	0	0	0	0
8	HS1331	Introduction to Society and Culture	3-0-0 : 3	7	0	2	4	1	0	0	0	0	0	0	0
9	HS1340	Principles of Economics	3-0-0 : 3	15	0	2	11	1	1	0	0	0	0	0	0
10	ME2261	Basic Manufacturing Processes	3-0-0 : 3	1	0	0	1	0	0	0	0	0	0	0	0
11	MM2308	Iron Making and Steel Making	3-0-0 : 3	1	0	0	0	0	0	0	0	0	1	0	0
12	FP2171	Food Properties Laboratory	0-0-3 : 2	36	6	25	3	1	0	0	0	0	1	0	0
13	EE2700	Basic Electrical Engineering Laboratory	0-0-2 : 1	36	0	10	16	2	3	2	0	0	3	0	0
14	HS1270	Language Laboratory	0-0-2 : 1	36	0	10	9	6	4	1	0	0	6	0	0

ID : Industrial Design

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	MA2203	Introduction to Probability and Statistics	3-1-0 : 4	45	2	25	15	3	0	0	0	0	0	0	0
2	ME2101	Mechanics of Solids	3-1-0 : 4	45	1	23	13	7	1	0	0	0	0	0	0
3	CS2061	Data Structure Applications and Algorithms	3-0-0 : 3	1	0	1	0	0	0	0	0	0	0	0	0
4	EC2610	Fundamentals of Signals and Systems	2-1-0 : 3	1	0	0	0	1	0	0	0	0	0	0	0
5	HS1317	Introduction to the Metaphysics of Sanskrit Language	3-0-0 : 3	4	0	0	2	1	1	0	0	0	0	0	0
6	HS1321	Introduction to Psychology	3-0-0 : 3	7	0	1	2	4	0	0	0	0	0	0	0
7	HS1331	Introduction to Society and Culture	3-0-0 : 3	15	1	2	7	5	0	0	0	0	0	0	0
8	HS1340	Principles of Economics	3-0-0 : 3	19	0	3	5	11	0	0	0	0	0	0	0
9	ID2101	Elements and Principles of Design	3-0-0 : 3	45	3	10	24	7	1	0	0	0	0	0	0
10	ME2103	Kinematics of Machines	3-0-0 : 3	45	4	10	18	11	2	0	0	0	0	0	0
11	ME2261	Basic Manufacturing Processes	3-0-0 : 3	3	0	1	2	0	0	0	0	0	0	0	0
12	EE2700	Basic Electrical Engineering Laboratory	0-0-2 : 1	45	3	22	13	4	1	1	0	0	1	0	0
13	HS1270	Language Laboratory	0-0-2 : 1	45	3	19	22	1	0	0	0	0	0	0	0
14	ID2701	Design Workshop - I	0-0-2 : 1	45	7	21	12	4	1	0	0	0	0	0	0

ME : Mechanical Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	ME2101	Mechanics of Solids	3-1-0 : 4	140	18	66	40	12	3	1	0	0	0	0	0
2	ME2301	Engineering Thermodynamics	3-1-0 : 4	140	16	61	45	12	5	0	0	0	1	0	0
3	CS2061	Data Structure Applications and Algorithms	3-0-0 : 3	6	0	2	1	3	0	0	0	0	0	0	0

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
4	EC2610	Fundamentals of Signals and Systems	2-1-0 : 3	4	0	1	2	1	0	0	0	0	0	0	0
5	EE2400	Network Analysis	3-0-0 : 3	8	1	1	2	1	1	0	0	0	2	0	0
6	HS1317	Introduction to the Metaphysics of Sanskrit Language	3-0-0 : 3	15	4	2	3	1	2	1	0	0	2	0	0
7	HS1321	Introduction to Psychology	3-0-0 : 3	20	0	2	7	10	0	1	0	0	0	0	0
8	HS1331	Introduction to Society and Culture	3-0-0 : 3	43	1	9	23	10	0	0	0	0	0	0	0
9	HS1340	Principles of Economics	3-0-0 : 3	62	1	18	23	16	4	0	0	0	0	0	0
10	ME2103	Kinematics of Machines	3-0-0 : 3	140	25	30	56	23	5	1	0	0	0	0	0
11	MM2308	Iron Making and Steel Making	3-0-0 : 3	2	0	0	1	0	1	0	0	0	0	0	0
12	PH2007	Electrostatics and Magnetostatics	3-0-0 : 3	5	0	2	3	0	0	0	0	0	0	0	0
13	ME2171	Machine Drawing and Solid Modelling	0-0-3 : 2	140	61	26	11	11	7	11	0	0	13	0	0
14	MM2107	Basic Physical Metallurgy	2-0-0 : 2	139	16	91	24	7	1	0	0	0	0	0	0
15	EE2700	Basic Electrical Engineering Laboratory	0-0-2 : 1	140	3	29	49	30	12	11	0	0	6	0	0
16	HS1270	Language Laboratory	0-0-2 : 1	140	9	103	21	5	1	0	0	0	1	0	0

MM : Metallurgical and Materials Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	MA2305	Numerical Analysis	3-1-0 : 4	72	14	25	15	13	0	2	0	0	3	0	0
2	MM2301	Metallurgical Thermodynamics and Kinetics	3-1-0 : 4	72	0	21	26	17	4	1	0	0	3	0	0
3	CS2061	Data Structure Applications and Algorithms	3-0-0 : 3	2	0	0	1	1	0	0	0	0	0	0	0
4	EC2610	Fundamentals of Signals and Systems	2-1-0 : 3	1	0	0	1	0	0	0	0	0	0	0	0
5	EE2400	Network Analysis	3-0-0 : 3	3	0	0	0	1	0	0	0	0	2	0	0
6	HS1317	Introduction to the Metaphysics of Sanskrit Language	3-0-0 : 3	3	0	0	2	1	0	0	0	0	0	0	0
7	HS1321	Introduction to Psychology	3-0-0 : 3	4	0	0	1	3	0	0	0	0	0	0	0
8	HS1331	Introduction to Society and Culture	3-0-0 : 3	33	0	6	16	9	0	1	0	0	1	0	0
9	HS1340	Principles of Economics	3-0-0 : 3	32	0	7	17	7	1	0	0	0	0	0	0
10	ME2261	Basic Manufacturing Processes	3-0-0 : 3	15	0	3	9	3	0	0	0	0	0	0	0
11	MM2302	Transport Phenomena	3-0-0 : 3	72	2	15	49	3	1	0	0	0	2	0	0
12	MM2306	Non Ferrous Metal Extraction-Principle and Practice	3-0-0 : 3	72	3	9	19	13	16	9	0	0	3	0	0
13	PH2007	Electrostatics and Magnetostatics	3-0-0 : 3	1	0	0	0	1	0	0	0	0	0	0	0
14	EC2700	Basic Electronics Laboratory	0-0-2 : 1	72	16	36	14	3	1	0	0	0	2	0	0
15	MM2321	Mineral Dressing	0-0-2 : 1	72	11	30	27	1	1	0	0	0	2	0	0
16	MM2511	Polymer and Composite Laboratory	0-0-2 : 1	72	9	16	23	12	6	3	0	0	3	0	0

MN : Mining Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	MA2203	Introduction to Probability and Statistics	3-1-0 : 4	48	5	27	11	4	1	0	0	0	0	0	0
2	CE2003	Mechanics of Solids	3-0-0 : 3	48	0	9	22	3	2	9	0	0	3	0	0
3	CS2061	Data Structure Applications and Algorithms	3-0-0 : 3	2	0	0	1	1	0	0	0	0	0	0	0
4	EC2610	Fundamentals of Signals and Systems	2-1-0 : 3	3	0	3	0	0	0	0	0	0	0	0	0
5	EE2400	Network Analysis	3-0-0 : 3	2	0	0	1	0	1	0	0	0	0	0	0
6	ER2251	Mining Geology	3-0-0 : 3	48	4	27	12	5	0	0	0	0	0	0	0
7	HS1317	Introduction to the Metaphysics of Sanskrit Language	3-0-0 : 3	3	0	0	1	1	0	1	0	0	0	0	0
8	HS1321	Introduction to Psychology	3-0-0 : 3	6	0	0	3	3	0	0	0	0	0	0	0
9	HS1331	Introduction to Society and Culture	3-0-0 : 3	12	0	2	7	2	1	0	0	0	0	0	0
10	HS1340	Principles of Economics	3-0-0 : 3	27	0	3	16	7	1	0	0	0	0	0	0
11	ME2261	Basic Manufacturing Processes	3-0-0 : 3	2	0	0	2	0	0	0	0	0	0	0	0
12	MM2308	Iron Making and Steel Making	3-0-0 : 3	3	0	0	0	3	0	0	0	0	0	0	0
13	MN2001	Mine Development	3-0-0 : 3	48	1	4	29	12	1	1	0	0	0	0	0
14	PH2007	Electrostatics and Magnetostatics	3-0-0 : 3	1	0	1	0	0	0	0	0	0	0	0	0
15	ER2271	Mining Geology Laboratory	0-0-3 : 2	48	1	3	7	23	13	0	0	0	1	0	0
16	EE2700	Basic Electrical Engineering Laboratory	0-0-2 : 1	48	1	10	24	12	1	0	0	0	0	0	0
17	HS1270	Language Laboratory	0-0-2 : 1	48	5	33	10	0	0	0	0	0	0	0	0

राष्ट्रीय प्रौद्योगिकी संस्थान राउरकेला
NATIONAL INSTITUTE OF TECHNOLOGY ROURKELA

GRADE STATISTICS REPORT (B.TECH. : 2021-22 - AUTUMN : 5TH SEMESTER)　　　　24-Dec-2021

BM : Biomedical Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	BM3201	Biomaterials	3-1-0 : 4	38	0	11	9	14	3	1	0	0	0	0	0
2	BM3601	Biomedical Instrumentation I	3-1-0 : 4	40	3	9	18	9	0	0	0	0	1	0	0
3	BM3001	Analytical Instrumentation and Techniques	3-0-0 : 3	40	2	8	18	10	1	0	0	0	1	0	0
4	BM3603	Biomedical Signal Processing	3-0-0 : 3	40	4	16	14	5	0	0	0	0	1	0	0
5	ME3161	Mechanics of Materials	3-0-0 : 3	1	0	1	0	0	0	0	0	0	0	0	0
6	SM6611	Business Research Methodology	3-0-0 : 3	40	0	14	18	3	2	2	0	0	1	0	0
7	BM3701	Biomedical Instrumentation Laboratory	0-0-3 : 2	40	7	18	11	2	1	0	0	0	1	0	0
8	BM3703	Biomaterials Laboratory	0-0-3 : 2	40	0	7	12	19	1	1	0	0	0	0	0
9	BM3705	Biomedical Signal Processing Laboratory	0-0-2 : 1	40	2	11	24	1	1	0	0	0	1	0	0
10	ME3071	Basic Mechanical Engineering Laboratory	0-0-2 : 1	1	0	1	0	0	0	0	0	0	0	0	0

Remarks (BM) :

#	Subject Code	RollNo	Student Name	Given Grade	Revised Grade	Revised Grade Reason

BT : Biotechnology

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	BM3101	Genetic Engineering	3-1-0 : 4	34	0	11	9	7	5	1	0	0	1	0	0
2	BM3303	Biochemical Engineering	3-1-0 : 4	34	0	12	8	7	2	3	0	0	2	0	0
3	BM3301	Bioprocess Instrumentation and Control	3-0-0 : 3	34	5	5	16	5	1	0	0	0	2	0	0
4	BM3305	Fermentation Technology	3-0-0 : 3	34	2	12	14	5	0	0	0	0	1	0	0
5	EC3510	Fundamentals of Communication Systems	3-0-0 : 3	1	0	0	1	0	0	0	0	0	0	0	0
6	SM6611	Business Research Methodology	3-0-0 : 3	33	0	18	9	2	1	1	0	0	2	0	0
7	BM3707	Biochemical Engineering Laboratory	0-0-3 : 2	34	2	10	14	6	0	0	0	0	2	0	0
8	BM3711	Genetic Engineering Laboratory	0-0-3 : 2	34	12	12	2	2	3	1	0	0	2	0	0
9	BM3709	Bioprocess Optimization Laboratory	0-0-2 : 1	35	6	17	5	3	1	0	0	0	3	0	0
10	EC3710	Electronics Circuit Design Laboratory	0-0-2 : 1	1	1	0	0	0	0	0	0	0	0	0	0

Remarks (BT) :

#	Subject Code	RollNo	Student Name	Given Grade	Revised Grade	Revised Grade Reason

CE : Civil Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	CE3001	Estimation and Construction Management	3-0-0 : 3	77	12	21	23	15	5	1	0	0	0	0	0
2	CE3107	Foundation Engineering	3-0-0 : 3	81	6	20	36	13	6	0	0	0	0	0	0
3	CE3203	Reinforced Concrete Design	3-0-0 : 3	78	4	7	14	23	17	13	0	0	0	0	0
4	CE3301	Transportation Engineering	3-0-0 : 3	81	10	25	33	10	2	1	0	0	0	0	0
5	CE3401	Water Resources Engineering	3-0-0 : 3	81	5	23	32	14	5	2	0	0	0	0	0
6	CS3061	Computer Architecture	3-0-0 : 3	3	0	1	2	0	0	0	0	0	0	0	0
7	EE3000	Electrical Machines	3-0-0 : 3	1	0	1	0	0	0	0	0	0	0	0	0
8	CE3701	Highway Engineering Laboratory	0-0-3 : 2	82	13	35	34	0	0	0	0	0	0	0	0
9	CE3703	Fluid Mechanics and Hydraulic Machines Laboratory	0-0-3 : 2	76	12	28	33	3	0	0	0	0	0	0	0
10	CE3705	Geotechnical Engineering Laboratory	0-0-3 : 2	81	15	28	20	18	0	0	0	0	0	0	0
11	CS2081	Data Structure Applications and Algorithms Laboratory	0-0-3 : 2	3	1	2	0	0	0	0	0	0	0	0	0
12	EE3700	Electrical Machines Laboratory	0-0-2 : 1	1	0	1	0	0	0	0	0	0	0	0	0

Remarks (CE) :

#	Subject Code	RollNo	Student Name	Given Grade	Revised Grade	Revised Grade Reason

CH : Chemical Engineering

#	Subject	Subject Name	L-T-P : Credit	No.	Grade Distribution

#	Code			Enrolled	EX	A	B	C	D	P	S	U	F	X	I
1	CH3111	Process Equipment Design	3-1-0 : 4	61	1	6	13	21	13	6	0	0	1	0	0
2	CH3113	Mass Transfer Operations– II	3-0-0 : 3	61	1	8	19	22	8	3	0	0	0	0	0
3	CH3215	Processing and Handling of Materials	3-0-0 : 3	61	0	4	25	17	13	2	0	0	0	0	0
4	CH3217	Chemical Process Technology	3-0-0 : 3	61	5	24	24	8	0	0	0	0	0	0	0
5	CH3311	Chemical Engineering Mathematics	3-0-0 : 3	62	0	1	4	19	30	8	0	0	0	0	0
6	CS3061	Computer Architecture	3-0-0 : 3	1	0	1	0	0	0	0	0	0	0	0	0
7	EC3510	Fundamentals of Communication Systems	3-0-0 : 3	1	0	0	1	0	0	0	0	0	0	0	0
8	EE3000	Electrical Machines	3-0-0 : 3	1	0	1	0	0	0	0	0	0	0	0	0
9	ME3161	Mechanics of Materials	3-0-0 : 3	5	1	1	2	0	0	0	0	0	1	0	0
10	PH3003	Heat and Thermodynamics	3-0-0 : 3	1	0	1	0	0	0	0	0	0	0	0	0
11	CH3171	Heat Transfer Operations Laboratory	0-0-3 : 2	61	2	25	34	0	0	0	0	0	0	0	0
12	CH3275	Chemical Reaction Engineering Laboratory	0-0-3 : 2	61	0	8	22	22	6	2	0	0	1	0	0
13	CS2081	Data Structure Applications and Algorithms Laboratory	0-0-3 : 2	1	0	1	0	0	0	0	0	0	0	0	0
14	CH3471	Fuels and Combustion Laboratory	0-0-2 : 1	61	0	20	28	11	2	0	0	0	0	0	0
15	EC3710	Electronics Circuit Design Laboratory	0-0-2 : 1	1	0	0	0	1	0	0	0	0	0	0	0
16	EE3700	Electrical Machines Laboratory	0-0-2 : 1	1	0	0	1	0	0	0	0	0	0	0	0
17	ME3071	Basic Mechanical Engineering Laboratory	0-0-2 : 1	5	1	2	1	0	0	0	0	0	1	0	0
18	PH4075	General Physics Laboratory	0-0-2 : 1	1	0	1	0	0	0	0	0	0	0	0	0

Remarks (CH) :

#	Subject Code	RollNo	Student Name	Given Grade	Revised Grade	Revised Grade Reason

CR : Ceramic Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
1	CR3101	Physical Ceramics: Properties	3-0-0 : 3	35	9	11	11	4	0	0	0	0	0	0	0
2	CR3103	Application of Phase Diagram	3-0-0 : 3	34	1	7	16	10	0	0	0	0	0	0	0
3	CR3105	Heat Transfer and Fluid Flow	3-0-0 : 3	36	0	5	12	18	0	1	0	0	0	0	0
4	CR3201	Instrumental Characterization	3-0-0 : 3	35	4	14	16	1	0	0	0	0	0	0	0
5	CR3401	Refractory Technology	3-0-0 : 3	34	1	7	8	11	6	1	0	0	0	0	0
6	MM3109	Fundamentals of Physical Metallurgy	3-0-0 : 3	2	1	1	0	0	0	0	0	0	0	0	0
7	CR3203	Instrumental Characterization Laboratory	0-0-3 : 2	34	5	3	8	15	3	0	0	0	0	0	0
8	CR3403	Refractory Laboratory	0-0-3 : 2	34	9	17	4	3	1	0	0	0	0	0	0
9	CR3205	MATLAB and Simulink Laboratory	0-0-2 : 1	34	12	16	4	0	2	0	0	0	0	0	0
10	MM4123	Physical Metallurgy Laboratory	0-0-2 : 1	2	1	1	0	0	0	0	0	0	0	0	0

Remarks (CR) :

#	Subject Code	RollNo	Student Name	Given Grade	Revised Grade	Revised Grade Reason

CS : Computer Science and Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
1	CS3001	Data Communication	3-0-0 : 3	163	7	53	102	1	0	0	0	0	0	0	0
2	CS3003	Object-Oriented System Design	3-0-0 : 3	157	18	86	43	7	3	0	0	0	0	0	0
3	CS3005	Microprocessors and Microcontrollers	3-0-0 : 3	164	9	86	64	5	0	0	0	0	0	0	0
4	CS3007	Compiler Design	3-0-0 : 3	158	0	3	38	82	35	0	0	0	0	0	0
5	CS3009	Operating Systems	3-0-0 : 3	164	0	27	93	36	5	3	0	0	0	0	0
6	EC3510	Fundamentals of Communication Systems	3-0-0 : 3	5	1	2	1	1	0	0	0	0	0	0	0
7	PH3003	Heat and Thermodynamics	3-0-0 : 3	1	1	0	0	0	0	0	0	0	0	0	0
8	CS3071	Operating Systems Laboratory	0-0-3 : 2	164	12	35	53	32	16	8	0	0	8	0	0
9	CS3073	Microprocessors Laboratory	0-0-3 : 2	163	17	76	66	4	0	0	0	0	0	0	0
10	CS3075	Compiler Design Laboratory	0-0-3 : 2	162	15	67	42	15	20	2	0	0	1	0	0
11	EC3710	Electronics Circuit Design Laboratory	0-0-2 : 1	5	1	0	2	1	0	0	0	0	1	0	0
12	PH4075	General Physics Laboratory	0-0-2 : 1	1	1	0	0	0	0	0	0	0	0	0	0

Remarks (CS) :

#	Subject Code	RollNo	Student Name	Given Grade	Revised Grade	Revised Grade Reason

EC : Electronics and Communication Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
					Grade Distribution										
1	CS3061	Computer Architecture	3-0-0 : 3	7	0	6	1	0	0	0	0	0	0	0	0
2	EC3001	Semiconductor Devices	3-0-0 : 3	83	0	3	20	26	27	7	0	0	0	0	0
3	EC3301	Control System Engineering	3-0-0 : 3	83	10	48	18	6	0	1	0	0	0	0	0
4	EC3501	Principles of Communication Systems	3-0-0 : 3	83	9	17	31	23	3	0	0	0	0	0	0
5	EC3505	Microwave Engineering	3-0-0 : 3	83	1	12	17	33	18	2	0	0	0	0	0
6	EC3601	Digital Signal Processing	3-0-0 : 3	83	0	30	35	16	2	0	0	0	0	0	0
7	CS2081	Data Structure Applications and Algorithms Laboratory	0-0-3 : 2	7	0	2	5	0	0	0	0	0	0	0	0
8	EC3701	Microprocessors Laboratory	1-0-2 : 2	83	0	53	22	7	0	1	0	0	0	0	0
9	EC3703	Communication Engineering Laboratory	0-0-3 : 2	83	13	24	21	18	6	0	0	0	1	0	0
10	EC3705	Digital Signal Processing Laboratory	0-0-2 : 1	83	9	47	21	2	4	0	0	0	0	0	0

Remarks (EC) :

#	Subject Code	RollNo	Student Name	Given Grade	Revised Grade	Revised Grade Reason

EE : Electrical Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
1	EE3401	Embedded Systems	3-1-0 : 4	122	1	4	8	38	57	14	0	0	0	0	0
2	CS3061	Computer Architecture	3-0-0 : 3	9	1	6	2	0	0	0	0	0	0	0	0
3	EC3510	Fundamentals of Communication Systems	3-0-0 : 3	9	0	6	0	0	0	0	0	0	3	0	0
4	EE3103	Power Generation, Transmission and Distribution	3-0-0 : 3	122	20	69	26	6	1	0	0	0	0	0	0
5	EE3201	Electric Drives	3-0-0 : 3	119	4	25	53	32	5	0	0	0	0	0	0
6	EE3301	Principles of Control Systems Engineering	3-0-0 : 3	120	3	5	12	21	29	41	0	0	9	0	0
7	EE3403	Digital Signal Processing	3-0-0 : 3	121	4	63	39	12	3	0	0	0	0	0	0
8	PH3003	Heat and Thermodynamics	3-0-0 : 3	1	1	0	0	0	0	0	0	0	0	0	0
9	CS2081	Data Structure Applications and Algorithms Laboratory	0-0-3 : 2	9	3	3	3	0	0	0	0	0	0	0	0
10	EE3701	Electrical Machine Laboratory - II	0-0-3 : 2	122	11	36	53	14	5	2	0	0	1	0	0
11	EE3703	Power Electronics Laboratory	0-0-3 : 2	120	12	49	38	14	7	0	0	0	0	0	0
12	EC3710	Electronics Circuit Design Laboratory	0-0-2 : 1	9	0	0	3	3	0	0	0	0	3	0	0
13	EE3705	Electronics Circuits Laboratory	0-0-2 : 1	120	0	57	44	13	6	0	0	0	0	0	0
14	PH4075	General Physics Laboratory	0-0-2 : 1	1	0	1	0	0	0	0	0	0	0	0	0

Remarks (EE) :

#	Subject Code	RollNo	Student Name	Given Grade	Revised Grade	Revised Grade Reason

EI : Electronics and Instrumentation Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
1	CS3061	Computer Architecture	3-0-0 : 3	5	3	2	0	0	0	0	0	0	0	0	0
2	EC3001	Semiconductor Devices	3-0-0 : 3	56	1	6	26	17	5	1	0	0	0	0	0
3	EC3301	Control System Engineering	3-0-0 : 3	56	7	30	14	4	0	1	0	0	0	0	0
4	EC3303	Instrumentation Devices	3-0-0 : 3	56	1	3	10	19	12	11	0	0	0	0	0
5	EC3501	Principles of Communication Systems	3-0-0 : 3	56	1	14	27	11	3	0	0	0	0	0	0
6	EC3601	Digital Signal Processing	3-0-0 : 3	56	0	24	21	8	2	1	0	0	0	0	0
7	CS2081	Data Structure Applications and Algorithms Laboratory	0-0-3 : 2	5	1	3	1	0	0	0	0	0	0	0	0
8	EC3701	Microprocessors Laboratory	1-0-2 : 2	56	0	45	6	4	0	1	0	0	0	0	0
9	EC3703	Communication Engineering Laboratory	0-0-3 : 2	56	20	21	9	3	3	0	0	0	0	0	0
10	EC3705	Digital Signal Processing Laboratory	0-0-2 : 1	56	14	21	11	3	3	0	0	0	4	0	0
11	PH4075	General Physics Laboratory	0-0-2 : 1	1	0	0	0	0	0	0	0	0	1	0	0

Remarks (EI) :

#	Subject Code	RollNo	Student Name	Given Grade	Revised Grade	Revised Grade Reason

FP : Food Process Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
1	EE3000	Electrical Machines	3-0-0 : 3	3	0	1	0	1	0	0	0	0	1	0	0
2	FP3105	Food Analysis and Quality Control	3-0-0 : 3	31	3	3	8	13	3	0	0	0	1	0	0
3	FP3301	Processing of Spices, Condiments and Plantation crops	3-0-0 : 3	31	4	6	13	4	3	0	0	0	1	0	0

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
4	FP3501	Dairy Process Engineering	3-0-0 : 3	31	1	6	9	8	4	2	0	0	1	0	0
5	FP3503	Processing of Livestock, Fish and Marine Products	3-0-0 : 3	31	2	9	13	6	0	0	0	0	1	0	0
6	FP3601	Food Packaging and Storage Engineering	3-0-0 : 3	31	3	22	5	0	0	0	0	0	1	0	0
7	ME3161	Mechanics of Materials	3-0-0 : 3	1	0	0	0	1	0	0	0	0	0	0	0
8	FP3271	Food Engineering Laboratory	0-0-3 : 2	31	3	15	10	2	0	0	0	0	1	0	0
9	FP3571	Dairy Process Engineering Laboratory	0-0-3 : 2	31	2	13	12	3	0	0	0	0	1	0	0
10	EE3700	Electrical Machines Laboratory	0-0-2 : 1	3	0	1	0	1	0	0	0	0	1	0	0
11	FP3671	Food Packaging and Storage Laboratory	0-0-2 : 1	31	5	25	0	0	0	0	0	0	1	0	0
12	ME3071	Basic Mechanical Engineering Laboratory	0-0-2 : 1	1	0	0	0	1	0	0	0	0	0	0	0

Remarks (FP) :

#	Subject Code	RollNo	Student Name	Given Grade	Revised Grade	Revised Grade Reason
1	EE3000	119FP0906	SURAJ SURESHRAO PATIL	B	C	Alternative Mid Semester

ID : Industrial Design

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
1	ID3201	Creative Engineering Design	3-0-0 : 3	36	3	16	16	1	0	0	0	0	0	0	0
2	ID3203	Introduction to Ergonomics	3-0-0 : 3	36	1	11	21	3	0	0	0	0	0	0	0
3	ID3205	Interaction Design	3-0-0 : 3	35	1	12	20	2	0	0	0	0	0	0	0
4	ID3207	Geometric and Solid Modelling	3-0-0 : 3	36	2	16	15	3	0	0	0	0	0	0	0
5	ID3301	Manufacturing Process	3-0-0 : 3	36	5	25	6	0	0	0	0	0	0	0	0
6	ID3701	Design Workshop - III	0-0-3 : 2	36	1	10	23	2	0	0	0	0	0	0	0
7	ID3801	Industrial Design Project- I	0-0-3 : 2	36	0	10	25	1	0	0	0	0	0	0	0
8	ID3703	Ergonomics Laboratory	0-0-2 : 1	36	3	17	16	0	0	0	0	0	0	0	0

Remarks (ID) :

#	Subject Code	RollNo	Student Name	Given Grade	Revised Grade	Revised Grade Reason

ME : Mechanical Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
1	EC3510	Fundamentals of Communication Systems	3-0-0 : 3	3	1	1	0	0	0	0	0	0	1	0	0
2	EE3000	Electrical Machines	3-0-0 : 3	1	1	0	0	0	0	0	0	0	0	0	0
3	ME3101	Design of Machine Elements	3-0-0 : 3	133	22	59	40	11	1	0	0	0	0	0	0
4	ME3201	Metal Machining and Automation	3-0-0 : 3	134	14	31	41	32	10	6	0	0	0	0	0
5	ME3301	Heat Transfer	3-0-0 : 3	133	15	25	40	23	26	4	0	0	0	0	0
6	ME3303	Fluid Dynamics and Hydraulic Machines	3-0-0 : 3	133	8	13	23	42	36	11	0	0	0	0	0
7	ME3103	System Dynamics and Control	2-0-0 : 2	133	19	56	50	6	2	0	0	0	0	0	0
8	ME3171	Machine Element Design Practice	0-0-3 : 2	133	23	96	14	0	0	0	0	0	0	0	0
9	ME3371	Fluid Mechanics and Fluid Machinery Laboratory	0-0-3 : 2	133	79	36	18	0	0	0	0	0	0	0	0
10	EC3710	Electronics Circuit Design Laboratory	0-0-2 : 1	3	0	0	2	0	0	0	0	0	1	0	0
11	EE3700	Electrical Machines Laboratory	0-0-2 : 1	1	1	0	0	0	0	0	0	0	0	0	0
12	ME3271	Production Engineering Laboratory	0-0-2 : 1	133	0	4	23	45	28	33	0	0	0	0	0

Remarks (ME) :

#	Subject Code	RollNo	Student Name	Given Grade	Revised Grade	Revised Grade Reason

MM : Metallurgical and Materials Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
1	CS3061	Computer Architecture	3-0-0 : 3	2	0	2	0	0	0	0	0	0	0	0	0
2	EC3510	Fundamentals of Communication Systems	3-0-0 : 3	1	0	1	0	0	0	0	0	0	0	0	0
3	EE3000	Electrical Machines	3-0-0 : 3	1	0	0	0	0	1	0	0	0	0	0	0
4	ME3161	Mechanics of Materials	3-0-0 : 3	5	0	3	1	0	0	0	0	0	1	0	0
5	MM3102	Phase Transformation	3-0-0 : 3	62	7	39	12	2	2	0	0	0	0	0	0
6	MM3201	Deformation Behavior of Materials	3-0-0 : 3	62	2	8	25	17	9	1	0	0	0	0	0
7	MM3304	Steel Making	3-0-0 : 3	62	0	11	32	19	0	0	0	0	0	0	0
8	MM3505	Advances in Materials	3-0-0 : 3	62	10	25	23	4	0	0	0	0	0	0	0
9	SM6611	Business Research Methodology	3-0-0 : 3	58	0	29	21	7	0	1	0	0	0	0	0
10	CS2081	Data Structure Applications and Algorithms Laboratory	0-0-3 : 2	2	0	0	2	0	0	0	0	0	0	0	0

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
11	MM3121	Metallography Laboratory	0-0-3 : 2	60	6	47	7	0	0	0	0	0	0	0	0
12	EC3710	Electronics Circuit Design Laboratory	0-0-2 : 1	1	0	0	1	0	0	0	0	0	0	0	0
13	EE3700	Electrical Machines Laboratory	0-0-2 : 1	1	0	0	0	1	0	0	0	0	0	0	0
14	ME3071	Basic Mechanical Engineering Laboratory	0-0-2 : 1	5	0	1	0	3	0	0	0	0	1	0	0
15	MM3421	Computational Metallurgy Laboratory	0-0-2 : 1	58	12	32	12	2	0	0	0	0	0	0	0
16	MM3521	Characterization of Materials Laboratory	0-0-2 : 1	58	7	29	22	0	0	0	0	0	0	0	0

Remarks (MM) :

#	Subject Code	RollNo	Student Name	Given Grade	Revised Grade	Revised Grade Reason

MN : Mining Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
1	EE3000	Electrical Machines	3-0-0 : 3	1	0	0	0	0	0	0	0	0	1	0	0
2	ME3161	Mechanics of Materials	3-0-0 : 3	3	2	1	0	0	0	0	0	0	0	0	0
3	MM3109	Fundamentals of Physical Metallurgy	3-0-0 : 3	1	0	1	0	0	0	0	0	0	0	0	0
4	MN3001	Mining Machinery	3-0-0 : 3	40	5	16	12	6	0	1	0	0	0	0	0
5	MN3005	Mine Economics	3-0-0 : 3	39	0	9	16	12	2	0	0	0	0	0	0
6	MN3101	Underground Metal Mining	3-0-0 : 3	40	1	8	16	15	0	0	0	0	0	0	0
7	MN3203	Underground Hazards and Rescue	3-0-0 : 3	40	6	28	5	1	0	0	0	0	0	0	0
8	MN3207	Coal and Mineral Processing Technology	3-0-0 : 3	40	3	18	18	1	0	0	0	0	0	0	0
9	MN3272	Hazard and Rescue Laboratory	0-0-3 : 2	40	12	25	3	0	0	0	0	0	0	0	0
10	MN3273	Coal and Mineral Processing Laboratory	0-0-3 : 2	40	11	15	11	3	0	0	0	0	0	0	0
11	EE3700	Electrical Machines Laboratory	0-0-2 : 1	1	0	0	0	0	0	0	0	0	1	0	0
12	ME3071	Basic Mechanical Engineering Laboratory	0-0-2 : 1	3	1	1	0	1	0	0	0	0	0	0	0
13	MM4123	Physical Metallurgy Laboratory	0-0-2 : 1	1	0	0	1	0	0	0	0	0	0	0	0
14	MN3073	Mining Machinery Laboratory	0-0-2 : 1	40	7	13	18	1	1	0	0	0	0	0	0

Remarks (MN) :

#	Subject Code	RollNo	Student Name	Given Grade	Revised Grade	Revised Grade Reason

राष्ट्रीय प्रौद्योगिकी संस्थान राउरकेला

NATIONAL INSTITUTE OF TECHNOLOGY ROURKELA

GRADE STATISTICS REPORT (B.TECH. : 2021-22 - AUTUMN : 7TH SEMESTER)   24-Dec-2021

BM : Biomedical Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
1	BM4001	Statistics for Bioengineers	3-0-0 : 3	28	2	12	9	4	1	0	0	0	0	0	0
2	BM4201	Nanobiotechnology	3-0-0 : 3	28	0	4	15	9	0	0	0	0	0	0	0
3	BM4301	Downstream Processing and Bioseparation	3-0-0 : 3	3	0	0	1	1	1	0	0	0	0	0	0
4	BM4601	Medical Embedded Systems	3-0-0 : 3	28	4	11	10	3	0	0	0	0	0	0	0
5	BM4603	Measurements, Sensors and Transducers	3-0-0 : 3	28	1	15	11	1	0	0	0	0	0	0	0
6	BM4091	Research Project - I	0-0-0 : 2	23	0	7	10	5	1	0	0	0	0	0	0
7	BM4701	Microprocessor and Microcontroller Laboratory	0-0-3 : 2	28	2	16	10	0	0	0	0	0	0	0	0
8	BM4903	Seminar and Technical Writing - I	0-0-3 : 2	26	3	8	15	0	0	0	0	0	0	0	0
9	BM4703	Health Informatics and Telemedicine Laboratory	0-0-2 : 1	28	2	10	14	2	0	0	0	0	0	0	0
10	BM4713	MATLAB Programming for Bioengineering Analysis	0-0-2 : 1	28	4	7	10	7	0	0	0	0	0	0	0

BT : Biotechnology

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
1	BM4201	Nanobiotechnology	3-0-0 : 3	24	0	4	12	8	0	0	0	0	0	0	0
2	BM4301	Downstream Processing and Bioseparation	3-0-0 : 3	24	2	8	10	4	0	0	0	0	0	0	0
3	BM4401	Plant Biotechnology	3-0-0 : 3	24	3	9	10	2	0	0	0	0	0	0	0
4	BM4601	Medical Embedded Systems	3-0-0 : 3	4	0	0	2	2	0	0	0	0	0	0	0
5	BM4603	Measurements, Sensors and Transducers	3-0-0 : 3	21	2	12	7	0	0	0	0	0	0	0	0
6	BM4091	Research Project - I	0-0-0 : 2	18	0	2	14	2	0	0	0	0	0	0	0
7	BM4707	Downstream Processing and Bioseparation Laboratory	0-0-3 : 2	24	1	2	7	12	1	1	0	0	0	0	0
8	BM4903	Seminar and Technical Writing - I	0-0-3 : 2	21	0	5	5	3	7	0	0	0	1	0	0

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
9	BM4705	Bioinformatics Laboratory	0-0-2 : 1	23	5	14	2	1	1	0	0	0	0	0	0
10	BM4709	Enzymology and Protein Engineering Laboratory	0-0-2 : 1	24	8	10	5	1	0	0	0	0	0	0	0

CE : Civil Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	CE4103	Advanced Foundation Engineering	3-0-0 : 3	62	3	14	17	21	7	0	0	0	0	0	0
2	CE4203	Advanced Design of Reinforced Concrete Structures	3-0-0 : 3	61	3	29	21	8	0	0	0	0	0	0	0
3	CE4401	Irrigation Engineering	3-0-0 : 3	62	10	18	19	12	3	0	0	0	0	0	0
4	CE4503	Environmental Impact Assessment	3-0-0 : 3	11	1	3	4	2	1	0	0	0	0	0	0
5	CE6132	Environmental Geotechinics	3-0-0 : 3	1	0	0	0	0	1	0	0	0	0	0	0
6	EC4310	Principles of Electronic Instrumentation	3-0-0 : 3	1	1	0	0	0	0	0	0	0	0	0	0
7	ME3262	Advanced Manufacturing Processes	3-0-0 : 3	4	1	3	0	0	0	0	0	0	0	0	0
8	SM6611	Business Research Methodology	3-0-0 : 3	61	0	32	24	4	1	0	0	0	0	0	0
9	CE4091	Research Project - I	0-0-0 : 2	50	6	19	21	4	0	0	0	0	0	0	0
10	CE4903	Seminar and Technical Writing - I	0-0-3 : 2	62	10	19	33	0	0	0	0	0	0	0	0
11	CE6271	Computational Laboratory	0-0-3 : 2	1	0	0	1	0	0	0	0	0	0	0	0
12	CE4701	Geotechnical Engineering Design Practice	0-0-2 : 1	62	11	23	16	8	3	1	0	0	0	0	0
13	CE4703	Steel Structures Design Practice	0-0-2 : 1	60	9	34	13	3	1	0	0	0	0	0	0
14	CE4705	Environmental Engineering Design Practice	0-0-2 : 1	61	4	15	30	12	0	0	0	0	0	0	0

CH : Chemical Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	CH4213	Colloidal and Interfacial Science and Engineering	3-0-0 : 3	3	0	0	1	1	1	0	0	0	0	0	0
2	CH4311	Process Modeling and Simulation	3-0-0 : 3	48	0	6	23	17	2	0	0	0	0	0	0
3	CH4313	Computational Fluid Dynamics	3-0-0 : 3	48	5	38	5	0	0	0	0	0	0	0	0
4	CH4317	Project Engineering	3-0-0 : 3	47	0	7	21	12	4	3	0	0	0	0	0
5	CH4513	Petroleum Refinery Engineering	3-0-0 : 3	45	2	19	15	6	3	0	0	0	0	0	0
6	CH6433	Environmental Management System	3-0-0 : 3	1	0	0	1	0	0	0	0	0	0	0	0
7	CH6532	Safety in Chemical industries	3-0-0 : 3	5	0	2	1	2	0	0	0	0	0	0	0
8	FP4231	Food Process Equipment and Plant Design	3-0-0 : 3	1	0	0	1	0	0	0	0	0	0	0	0
9	ME3262	Advanced Manufacturing Processes	3-0-0 : 3	4	0	4	0	0	0	0	0	0	0	0	0
10	CH4091	Research Project - I	0-0-0 : 2	43	0	17	18	8	0	0	0	0	0	0	0
11	CH4373	Computational Fluid Dynamics Laboratory	0-0-3 : 2	49	0	41	8	0	0	0	0	0	0	0	0
12	CH4903	Seminar and Technical Writing - I	0-0-3 : 2	48	0	2	20	26	0	0	0	0	0	0	0
13	CH4271	Materials Handling Laboratory	0-0-2 : 1	49	1	12	34	2	0	0	0	0	0	0	0
14	CH4371	Process Plant Simulation Laboratory	0-0-2 : 1	49	0	8	29	8	4	0	0	0	0	0	0

CR : Ceramic Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	CR4101	Structural Ceramics	3-0-0 : 3	36	1	2	0	6	10	14	0	0	3	0	0
2	CR4201	Nanoceramics	3-0-0 : 3	36	2	6	25	2	1	0	0	0	0	0	0
3	CR4203	Bioceramics	3-0-0 : 3	36	0	1	6	16	11	2	0	0	0	0	0
4	CR4205	Composite Materials	3-0-0 : 3	35	2	11	16	5	1	0	0	0	0	0	0
5	MM3207	Mechanical Metallurgy	3-0-0 : 3	2	0	0	2	0	0	0	0	0	0	0	0
6	CR4091	Research Project - I	0-0-0 : 2	36	0	1	14	13	8	0	0	0	0	0	0
7	CR4103	Mechanical Testing Laboratory	0-0-3 : 2	36	8	18	8	2	0	0	0	0	0	0	0
8	CR4903	Seminar and Technical Writing - I	0-0-3 : 2	36	5	7	6	14	4	0	0	0	0	0	0
9	CR6174	Equipment Design Laboratory	0-0-3 : 2	36	0	20	14	2	0	0	0	0	0	0	0
10	CR4202	Finite Element Laboratory	0-0-2 : 1	36	14	5	8	4	2	3	0	0	0	0	0

CS : Computer Science and Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	CS6114	Wireless Sensor Networks	3-0-0 : 3	1	1	0	0	0	0	0	0	0	0	0	0
2	CS6217	Biometric Security	3-0-0 : 3	98	4	25	54	12	3	0	0	0	0	0	0
3	CS6218	Machine Learning	3-0-0 : 3	112	0	10	75	27	0	0	0	0	0	0	0
4	CS6220	Computer Vision	3-0-0 : 3	14	1	4	4	3	2	0	0	0	0	0	0
5	CS6312	Data Warehousing and Mining	3-0-0 : 3	111	3	38	58	12	0	0	0	0	0	0	0
6	CS6316	Internet of Things	3-0-0 : 3	4	0	1	3	0	0	0	0	0	0	0	0

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
7	CS6412	Artificial Intelligence	3-0-0 : 3	106	8	43	49	6	0	0	0	0	0	0	0
8	CS6413	Software Project, Process and Quality Management	3-0-0 : 3	44	0	14	25	4	1	0	0	0	0	0	0
9	EC4310	Principles of Electronic Instrumentation	3-0-0 : 3	5	0	4	1	0	0	0	0	0	0	0	0
10	ME3262	Advanced Manufacturing Processes	3-0-0 : 3	1	0	1	0	0	0	0	0	0	0	0	0
11	SM6611	Business Research Methodology	3-0-0 : 3	1	0	1	0	0	0	0	0	0	0	0	0
12	CS4091	Research Project - I	0-0-0 : 2	69	1	22	27	13	4	1	0	0	1	0	0
13	CS4373	Artificial Intelligence Laboratory	0-0-3 : 2	107	17	23	38	22	7	0	0	0	0	0	0
14	CS4903	Seminar and Technical Writing - I	0-0-3 : 2	111	3	19	49	25	15	0	0	0	0	0	0
15	CS6172	Network Simulation Laboratory	0-0-3 : 2	112	17	59	22	5	1	7	0	0	1	0	0
16	CS6272	Machine Learning Laboratory	0-0-3 : 2	112	10	35	41	16	7	3	0	0	0	0	0
17	CS6380	Internet of Things Laboratory	0-0-3 : 2	5	0	4	1	0	0	0	0	0	0	0	0

EC : Electronics and Communication Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
1	EC4201	VLSI Design Techniques	3-0-0 : 3	51	2	25	20	4	0	0	0	0	0	0	0
2	EC6205	Integrated Circuit for Digital Signal Processing	3-0-0 : 3	2	0	0	0	1	1	0	0	0	0	0	0
3	EC6401	Microwave Devices and Circuits	3-0-0 : 3	53	6	32	13	2	0	0	0	0	0	0	0
4	EC6501	Data Communication Networks	3-0-0 : 3	53	2	33	17	0	1	0	0	0	0	0	0
5	EC6505	Advanced Digital Communication	3-0-0 : 3	7	0	0	0	6	1	0	0	0	0	0	0
6	EC6515	Mobile Communication	3-0-0 : 3	51	2	17	27	3	0	2	0	0	0	0	0
7	EE3300	Principles of Control Systems Engineering	3-0-0 : 3	3	2	1	0	0	0	0	0	0	0	0	0
8	EC4091	Research Project - I	0-0-0 : 2	43	0	7	17	13	5	0	0	0	1	0	0
9	EC4715	VLSI Design Laboratory	0-0-3 : 2	53	12	23	8	6	4	0	0	0	0	0	0
10	EC4903	Seminar and Technical Writing - I	0-0-3 : 2	52	16	19	17	0	0	0	0	0	0	0	0
11	EC6471	Microwave Circuits Design Laboratory	0-0-3 : 2	11	2	7	2	0	0	0	0	0	0	0	0
12	EC4703	Communication Networks Laboratory	0-0-2 : 1	53	2	18	28	5	0	0	0	0	0	0	0
13	EC4717	Mobile Communication Simulation Laboratory	0-0-2 : 1	42	0	24	15	3	0	0	0	0	0	0	0

EE : Electrical Engineering

#	Subject	Subject Name	L-T-P : Credit	No.	Grade Distribution

	Code			Enrolled	EX	A	B	C	D	P	S	U	F	X	I
1	CS4062	Fundamentals of Computer Networks	3-0-0 : 3	4	0	3	1	0	0	0	0	0	0	0	0
2	EC4310	Principles of Electronic Instrumentation	3-0-0 : 3	5	0	3	2	0	0	0	0	0	0	0	0
3	EE4101	Power System Protection	3-0-0 : 3	95	1	34	49	9	0	2	0	0	0	0	0
4	EE4103	High Voltage Engineering and HVDC Transmission	3-0-0 : 3	88	1	19	52	15	1	0	0	0	0	0	0
5	EE4201	Modelling and Control of Power Electronics Systems	3-0-0 : 3	22	0	1	1	6	7	7	0	0	0	0	0
6	EE4405	Digital Communication	3-0-0 : 3	73	0	10	35	15	11	2	0	0	0	0	0
7	EE6243	Soft Computing Techniques	3-0-0 : 3	20	0	0	1	15	2	2	0	0	0	0	0
8	EE6245	Silicon Solar Cell Technology	3-0-0 : 3	7	0	0	2	2	2	1	0	0	0	0	0
9	MM3207	Mechanical Metallurgy	3-0-0 : 3	1	0	0	0	0	1	0	0	0	0	0	0
10	SM6611	Business Research Methodology	3-0-0 : 3	95	0	61	28	5	1	0	0	0	0	0	0
11	EE4091	Research Project - I	0-0-0 : 2	73	1	35	20	12	5	0	0	0	0	0	0
12	EE4701	Power Systems Laboratory	0-0-3 : 2	94	11	33	40	10	0	0	0	0	0	0	0
13	EE4903	Seminar and Technical Writing - I	0-0-3 : 2	94	3	29	34	19	9	0	0	0	0	0	0
14	EE4703	Communication Systems Laboratory	0-0-2 : 1	95	1	24	36	29	4	1	0	0	0	0	0
15	EE4705	Control and Electrical System Design	0-0-2 : 1	94	9	31	41	13	0	0	0	0	0	0	0

EI : Electronics and Instrumentation Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
1	CS4062	Fundamentals of Computer Networks	3-0-0 : 3	1	0	0	1	0	0	0	0	0	0	0	0
2	EC4201	VLSI Design Techniques	3-0-0 : 3	42	1	15	20	6	0	0	0	0	0	0	0
3	EC4301	Industrial Instrumentation	3-0-0 : 3	43	4	12	18	5	4	0	0	0	0	0	0
4	EC4303	Biomedical Instrumentation	3-0-0 : 3	44	0	5	23	13	3	0	0	0	0	0	0
5	EC6205	Integrated Circuit for Digital Signal Processing	3-0-0 : 3	13	0	1	2	8	1	1	0	0	0	0	0
6	EC6305	Analytical Instrumentation	3-0-0 : 3	44	0	8	24	8	3	1	0	0	0	0	0
7	ME3262	Advanced Manufacturing Processes	3-0-0 : 3	1	0	1	0	0	0	0	0	0	0	0	0
8	EC4091	Research Project - I	0-0-0 : 2	29	2	6	7	8	2	1	0	0	3	0	0
9	EC4715	VLSI Design Laboratory	0-0-3 : 2	44	6	27	10	0	0	0	0	0	1	0	0
10	EC4719	Process Control Laboratory	0-0-3 : 2	44	5	17	20	2	0	0	0	0	0	0	0
11	EC4903	Seminar and Technical Writing - I	0-0-3 : 2	44	15	19	10	0	0	0	0	0	0	0	0

| 12 | EC4709 | Virtual Instrumentation Laboratory | 0-0-2 : 1 | 44 | 5 | 15 | 19 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

FP : Food Process Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	FP4109	Food Ingredients and Additives	3-0-0 : 3	21	2	13	4	2	0	0	0	0	0	0	0
2	FP4207	Food Industry By-Product and Waste Management	3-0-0 : 3	26	0	5	13	6	2	0	0	0	0	0	0
3	FP4211	Process Control and instrumentation in Food industry	3-0-0 : 3	27	0	15	9	3	0	0	0	0	0	0	0
4	FP4213	Food Process Modeling and Simulation	3-0-0 : 3	27	0	5	6	10	4	2	0	0	0	0	0
5	FP4231	Food Process Equipment and Plant Design	3-0-0 : 3	27	1	14	11	1	0	0	0	0	0	0	0
6	FP6235	Advanced Thermal Operation in Food Processing	3-0-0 : 3	1	0	0	1	0	0	0	0	0	0	0	0
7	FP4091	Research Project - I	0-0-0 : 2	3	0	2	1	0	0	0	0	0	0	0	0
8	FP4171	Food Product Technology Laboratory	0-0-3 : 2	27	3	10	11	3	0	0	0	0	0	0	0
9	FP4271	Food Process Equipment and Plant Design Laboratory	0-0-3 : 2	27	9	13	5	0	0	0	0	0	0	0	0
10	FP4471	Bakery and Confectionery Technology Laboratory	0-0-3 : 2	27	2	15	5	5	0	0	0	0	0	0	0
11	FP4903	Seminar and Technical Writing - I	0-0-3 : 2	25	2	12	9	2	0	0	0	0	0	0	0

ID : Industrial Design

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	BM4001	Statistics for Bioengineers	3-0-0 : 3	27	2	11	10	3	1	0	0	0	0	0	0
2	CS4062	Fundamentals of Computer Networks	3-0-0 : 3	1	0	1	0	0	0	0	0	0	0	0	0
3	FP4207	Food Industry By-Product and Waste Management	3-0-0 : 3	28	1	12	13	1	1	0	0	0	0	0	0
4	FP4213	Food Process Modeling and Simulation	3-0-0 : 3	1	0	0	0	1	0	0	0	0	0	0	0
5	ID6235	Optimization Methods in Industrial Design	3-0-0 : 3	28	6	17	4	1	0	0	0	0	0	0	0
6	ME3262	Advanced Manufacturing Processes	3-0-0 : 3	1	0	1	0	0	0	0	0	0	0	0	0
7	SM6611	Business Research Methodology	3-0-0 : 3	28	0	23	3	2	0	0	0	0	0	0	0
8	ID4091	Research Project - I	0-0-0 : 2	28	2	18	8	0	0	0	0	0	0	0	0
9	ID4903	Seminar and Technical Writing - I	0-0-3 : 2	28	3	6	18	1	0	0	0	0	0	0	0
10	ID4701	Design Workshop - IV	0-0-2 : 1	28	10	16	2	0	0	0	0	0	0	0	0
11	ID4703	Simulation Laboratory- II	0-0-2 : 1	28	8	12	7	1	0	0	0	0	0	0	0
12	ID4705	Computer Aided Manufacturing Laboratory	0-0-2 : 1	28	3	23	2	0	0	0	0	0	0	0	0

ME : Mechanical Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	EC4310	Principles of Electronic Instrumentation	3-0-0 : 3	1	0	1	0	0	0	0	0	0	0	0	0
2	EE3300	Principles of Control Systems Engineering	3-0-0 : 3	3	0	0	1	2	0	0	0	0	0	0	0
3	ME4131	Mechanical Vibration	3-0-0 : 3	105	14	66	21	4	0	0	0	0	0	0	0
4	ME4237	Decision Modeling	3-0-0 : 3	105	6	13	33	23	21	8	0	0	1	0	0
5	ME4333	Refrigeration and Air-Conditioning	3-0-0 : 3	106	20	61	24	1	0	0	0	0	0	0	0
6	ME6235	Neural Network and Artificial Intelligence	3-0-0 : 3	11	0	7	2	2	0	0	0	0	0	0	0
7	ME6241	Production Management	3-0-0 : 3	4	0	2	2	0	0	0	0	0	0	0	0
8	ME6341	Refrigeration and Cryogenic Systems	3-0-0 : 3	5	0	4	1	0	0	0	0	0	0	0	0
9	PH4007	Quantum Mechanics and Applications	3-0-0 : 3	1	0	0	0	0	1	0	0	0	0	0	0
10	SM6611	Business Research Methodology	3-0-0 : 3	105	0	70	33	1	1	0	0	0	0	0	0
11	ME4091	Research Project - I	0-0-0 : 2	86	2	39	33	10	2	0	0	0	0	0	0
12	ME4371	Computational Fluid Dynamics Laboratory	0-0-3 : 2	106	16	36	30	16	7	1	0	0	0	0	0
13	ME4373	Heat Transfer and Refrigeration Laboratory	0-0-3 : 2	106	21	39	43	3	0	0	0	0	0	0	0
14	ME4903	Seminar and Technical Writing - I	0-0-3 : 2	106	38	32	29	7	0	0	0	0	0	0	0
15	ME4171	Mechanical System Design Project	0-0-2 : 1	106	23	52	28	3	0	0	0	0	0	0	0

MM : Metallurgical and Materials Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	EC4310	Principles of Electronic Instrumentation	3-0-0 : 3	1	0	0	1	0	0	0	0	0	0	0	0
2	ME3262	Advanced Manufacturing Processes	3-0-0 : 3	4	0	4	0	0	0	0	0	0	0	0	0
3	MM4108	Stainless steel Technologies	3-0-0 : 3	36	0	7	20	8	1	0	0	0	0	0	0
4	MM4509	Nanostructured Materials	3-0-0 : 3	40	5	5	12	11	5	2	0	0	0	0	0
5	MM4510	Advanced Processing of Materials	3-0-0 : 3	29	4	5	16	3	1	0	0	0	0	0	0
6	MM5211	Mechanical Working of Metallic Materials	3-0-0 : 3	46	4	15	16	10	1	0	0	0	0	0	0
7	MM5523	Surface Engineering	3-0-0 : 3	50	6	24	20	0	0	0	0	0	0	0	0

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
8	MM4091	Research Project - I	0-0-0 : 2	48	6	29	9	4	0	0	0	0	0	0	0
9	MM4903	Seminar and Technical Writing - I	0-0-3 : 2	49	13	26	10	0	0	0	0	0	0	0	0
10	MM4422	Design and Calculation Laboratory	0-0-2 : 1	50	3	24	22	1	0	0	0	0	0	0	0
11	MM4423	Atomistic Modelling of Materials Laboratory	0-0-2 : 1	50	4	22	23	1	0	0	0	0	0	0	0
12	MM4521	Electrometallurgy and Corrosion Laboratory	0-0-2 : 1	50	6	14	30	0	0	0	0	0	0	0	0

MN : Mining Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	EC4310	Principles of Electronic Instrumentation	3-0-0 : 3	1	0	0	1	0	0	0	0	0	0	0	0
2	EE3300	Principles of Control Systems Engineering	3-0-0 : 3	2	0	0	2	0	0	0	0	0	0	0	0
3	ME3262	Advanced Manufacturing Processes	3-0-0 : 3	1	0	0	1	0	0	0	0	0	0	0	0
4	MN3006	Mineral Resource Evaluation and Geostatistics	3-0-0 : 3	21	8	12	1	0	0	0	0	0	0	0	0
5	MN3024	Ground Control Instrumentation	3-0-0 : 3	2	1	1	0	0	0	0	0	0	0	0	0
6	MN3025	Blasting Technology	3-0-0 : 3	8	1	3	4	0	0	0	0	0	0	0	0
7	MN3207	Coal and Mineral Processing Technology	3-0-0 : 3	6	0	1	4	1	0	0	0	0	0	0	0
8	MN4021	Mine Planning and Design	3-0-0 : 3	13	0	8	4	1	0	0	0	0	0	0	0
9	MN5002	Computer Application in Mining	3-0-0 : 3	34	8	12	11	2	0	1	0	0	0	0	0
10	MN6035	Mine Systems Engineering	3-0-0 : 3	34	0	3	13	9	8	1	0	0	0	0	0
11	MN6122	Rock Slope Technology	3-0-0 : 3	27	4	8	8	4	2	1	0	0	0	0	0
12	MN4072	Mine System Laboratory	0-0-3 : 2	34	5	6	21	2	0	0	0	0	0	0	0
13	MN4091	Research Project - I	0-0-0 : 2	24	2	10	10	2	0	0	0	0	0	0	0
14	MN4271	Environmental Engineering Laboratory	0-0-3 : 2	33	0	2	8	18	5	0	0	0	0	0	0
15	MN4903	Seminar and Technical Writing - I	0-0-3 : 2	34	2	4	11	17	0	0	0	0	0	0	0
16	MN5023	Computer Application in Mining Laboratory	0-0-3 : 2	33	8	14	6	4	1	0	0	0	0	0	0

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NATIONAL INSTITUTE OF TECHNOLOGY ROURKELA

GRADE STATISTICS REPORT (INTEGRATED M.SC. : 2021-22 - AUTUMN : 3RD SEMESTER)   24-Dec-2021

CY5 : Chemistry

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	MA2305	Numerical Analysis	3-1-0 : 4	16	1	3	9	3	0	0	0	0	0	0	0
2	CY2101	Hydrocarbons and Their Functional Groups	3-0-0 : 3	16	0	0	11	5	0	0	0	0	0	0	0
3	CY2201	Principles of Inorganic Chemistry	3-0-0 : 3	16	1	14	1	0	0	0	0	0	0	0	0
4	CY2301	Physical Chemistry: Equilibrium and Changes	3-0-0 : 3	16	5	4	6	1	0	0	0	0	0	0	0
5	HS1317	Introduction to the Metaphysics of Sanskrit Language	3-0-0 : 3	2	0	1	0	0	1	0	0	0	0	0	0
6	HS1321	Introduction to Psychology	3-0-0 : 3	3	0	0	1	2	0	0	0	0	0	0	0
7	HS1331	Introduction to Society and Culture	3-0-0 : 3	3	1	0	2	0	0	0	0	0	0	0	0
8	HS1340	Principles of Economics	3-0-0 : 3	8	0	1	2	5	0	0	0	0	0	0	0
9	MM2308	Iron Making and Steel Making	3-0-0 : 3	1	0	0	0	0	1	0	0	0	0	0	0
10	PH2007	Electrostatics and Magnetostatics	3-0-0 : 3	1	0	1	0	0	0	0	0	0	0	0	0
11	CY2701	Functional Group Identification Laboratory	0-0-2 : 1	16	1	9	3	2	1	0	0	0	0	0	0
12	EE2700	Basic Electrical Engineering Laboratory	0-0-2 : 1	16	0	2	9	5	0	0	0	0	0	0	0
13	HS1270	Language Laboratory	0-0-2 : 1	16	1	7	4	2	0	1	0	0	1	0	0

LS5 : Life Science

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	MA2203	Introduction to Probability and Statistics	3-1-0 : 4	11	0	8	3	0	0	0	0	0	0	0	0
2	CY2201	Principles of Inorganic Chemistry	3-0-0 : 3	11	1	4	5	1	0	0	0	0	0	0	0
3	HS1317	Introduction to the Metaphysics of Sanskrit Language	3-0-0 : 3	1	0	0	1	0	0	0	0	0	0	0	0
4	HS1321	Introduction to Psychology	3-0-0 : 3	6	0	0	4	2	0	0	0	0	0	0	0
5	HS1331	Introduction to Society and Culture	3-0-0 : 3	3	0	2	1	0	0	0	0	0	0	0	0

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
6	HS1340	Principles of Economics	3-0-0 : 3	1	0	0	1	0	0	0	0	0	0	0	0
7	LS2101	Basic Biochemistry	3-0-0 : 3	11	2	5	3	1	0	0	0	0	0	0	0
8	LS2601	Basic Microbiology	3-0-0 : 3	11	1	6	4	0	0	0	0	0	0	0	0
9	MM2308	Iron Making and Steel Making	3-0-0 : 3	1	0	0	1	0	0	0	0	0	0	0	0
10	LS2091	Life Science Laboratory- I	0-0-3 : 2	11	3	3	2	2	1	0	0	0	0	0	0
11	EC2700	Basic Electronics Laboratory	0-0-2 : 1	11	1	4	5	1	0	0	0	0	0	0	0
12	HS1270	Language Laboratory	0-0-2 : 1	11	1	5	2	2	0	1	0	0	0	0	0

MA5 : Mathematics

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	MA2203	Introduction to Probability and Statistics	3-1-0 : 4	22	1	17	4	0	0	0	0	0	0	0	0
2	MA2305	Numerical Analysis	3-1-0 : 4	22	0	3	8	11	0	0	0	0	0	0	0
3	CS2061	Data Structure Applications and Algorithms	3-0-0 : 3	2	0	0	2	0	0	0	0	0	0	0	0
4	CY2301	Physical Chemistry: Equilibrium and Changes	3-0-0 : 3	22	7	12	3	0	0	0	0	0	0	0	0
5	HS1317	Introduction to the Metaphysics of Sanskrit Language	3-0-0 : 3	4	0	1	0	1	1	1	0	0	0	0	0
6	HS1321	Introduction to Psychology	3-0-0 : 3	6	0	1	2	3	0	0	0	0	0	0	0
7	HS1331	Introduction to Society and Culture	3-0-0 : 3	4	0	1	3	0	0	0	0	0	0	0	0
8	HS1340	Principles of Economics	3-0-0 : 3	8	0	3	3	1	1	0	0	0	0	0	0
9	MM2308	Iron Making and Steel Making	3-0-0 : 3	1	0	0	0	0	1	0	0	0	0	0	0
10	PH2003	Electricity and Magnetism	3-0-0 : 3	22	0	6	12	3	1	0	0	0	0	0	0
11	PH2007	Electrostatics and Magnetostatics	3-0-0 : 3	3	1	2	0	0	0	0	0	0	0	0	0
12	EE2700	Basic Electrical Engineering Laboratory	0-0-2 : 1	22	1	9	7	4	0	0	0	0	1	0	0
13	HS1270	Language Laboratory	0-0-2 : 1	22	3	8	11	0	0	0	0	0	0	0	0
14	PH2071	Electricity and Magnetism Laboratory	0-0-2 : 1	22	5	9	7	1	0	0	0	0	0	0	0

PH5 : Physics

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	MA2203	Introduction to Probability and Statistics	3-1-0 : 4	20	1	6	8	2	1	0	0	0	2	0	0
2	CY2301	Physical Chemistry: Equilibrium and Changes	3-0-0 : 3	19	1	1	13	3	0	1	0	0	0	0	0
3	HS1317	Introduction to the Metaphysics of Sanskrit Language	3-0-0 : 3	2	0	0	1	0	0	0	0	0	1	0	0
4	HS1321	Introduction to Psychology	3-0-0 : 3	4	0	0	0	4	0	0	0	0	0	0	0
5	HS1331	Introduction to Society and Culture	3-0-0 : 3	8	0	2	3	3	0	0	0	0	0	0	0
6	HS1340	Principles of Economics	3-0-0 : 3	5	0	0	3	2	0	0	0	0	0	0	0
7	MM2308	Iron Making and Steel Making	3-0-0 : 3	1	0	0	1	0	0	0	0	0	0	0	0
8	PH2001	Waves and Oscillations	3-0-0 : 3	19	3	5	2	3	3	2	0	0	1	0	0
9	PH3006	Basic Mathematical Physics	3-0-0 : 3	20	1	4	4	4	1	2	0	0	4	0	0
10	PH3071	Properties of Matter Laboratory	0-0-3 : 2	19	0	11	7	1	0	0	0	0	0	0	0
11	CY2701	Functional Group Identification Laboratory	0-0-2 : 1	19	0	5	6	4	3	0	0	0	1	0	0
12	EC2700	Basic Electronics Laboratory	0-0-2 : 1	19	4	8	6	0	0	1	0	0	0	0	0

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GRADE STATISTICS REPORT (INTEGRATED M.SC. : 2021-22 - AUTUMN : 5TH SEMESTER) 24-Dec-2021

CY5 : Chemistry

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution											
					EX	A	B	C	D	P	S	U	F	X	I
1	CY3201	Chemistry of Elements	3-0-0 : 3	18	0	6	5	7	0	0	0	0	0	0	0
2	CY3301	Physical Chemistry: Matters and Surface	3-0-0 : 3	18	0	2	4	5	2	5	0	0	0	0	0
3	CY3302	Chemical Kinetics and Photochemistry	3-0-0 : 3	17	3	2	6	2	2	2	0	0	0	0	0
4	CY3401	Fundamentals of Materials and Nanochemistry	3-0-0 : 3	18	2	2	6	7	1	0	0	0	0	0	0
5	PH2003	Electricity and Magnetism	3-0-0 : 3	18	1	4	9	4	0	0	0	0	0	0	0
6	CY3701	Basic Inorganic Chemistry Laboratory - I	0-0-3 : 2	18	0	3	7	6	2	0	0	0	0	0	0
7	CY3703	Chemical Biology Laboratory	0-0-3 : 2	18	2	6	7	3	0	0	0	0	0	0	0

LS5 : Life Science

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution											
					EX	A	B	C	D	P	S	U	F	X	I
1	CY3301	Physical Chemistry: Matters and Surface	3-0-0 : 3	14	0	0	2	5	5	2	0	0	0	0	0
2	LS3302	Bioinstrumentation	3-0-0 : 3	12	0	2	3	6	1	0	0	0	0	0	0
3	LS3404	Evolutionary Biology	3-0-0 : 3	14	1	5	1	6	1	0	0	0	0	0	0
4	LS3405	Genetics	3-0-0 : 3	13	1	3	2	2	4	1	0	0	0	0	0
5	LS3406	Molecular Basis of Development	3-0-0 : 3	13	1	4	3	0	2	3	0	0	0	0	0
6	LS3093	Life Science Laboratory- III	0-0-0 : 2	12	2	4	4	2	0	0	0	0	0	0	0

MA5 : Mathematics

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution											
					EX	A	B	C	D	P	S	U	F	X	I
1	MA3101	Introduction to Algebra: Group and Ring Theory	3-1-0 : 4	23	0	0	14	9	0	0	0	0	0	0	0
2	MA3103	Introduction to Real Analysis and Metric Spaces	3-1-0 : 4	23	0	3	17	2	1	0	0	0	0	0	0
3	CY3201	Chemistry of Elements	3-0-0 : 3	23	0	4	15	4	0	0	0	0	0	0	0
4	MA5251	Discrete Mathematics	3-0-0 : 3	23	0	0	8	13	2	0	0	0	0	0	0
5	PH3003	Heat and Thermodynamics	3-0-0 : 3	1	0	1	0	0	0	0	0	0	0	0	0
6	SM6611	Business Research Methodology	3-0-0 : 3	23	0	5	14	3	1	0	0	0	0	0	0
7	CY3701	Basic Inorganic Chemistry Laboratory - I	0-0-3 : 2	23	0	2	12	6	3	0	0	0	0	0	0
8	PH4075	General Physics Laboratory	0-0-2 : 1	1	0	1	0	0	0	0	0	0	0	0	0

PH5 : Physics

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution											
					EX	A	B	C	D	P	S	U	F	X	I
1	MA3101	Introduction to Algebra: Group and Ring Theory	3-1-0 : 4	18	0	1	8	7	0	2	0	0	0	0	0
2	MA3103	Introduction to Real Analysis and Metric Spaces	3-1-0 : 4	18	0	1	5	9	2	1	0	0	0	0	0
3	PH3001	Thermal and Statistical Physics	3-1-0 : 4	17	1	6	5	3	2	0	0	0	0	0	0
4	CS3061	Computer Architecture	3-0-0 : 3	1	0	0	0	0	0	1	0	0	0	0	0
5	EE3000	Electrical Machines	3-0-0 : 3	1	0	0	1	0	0	0	0	0	0	0	0
6	PH2003	Electricity and Magnetism	3-0-0 : 3	18	1	8	2	5	2	0	0	0	0	0	0
7	PH3062	Vacuum Science and Applications	3-0-0 : 3	18	2	4	3	8	1	0	0	0	0	0	0
8	CS2081	Data Structure Applications and Algorithms Laboratory	0-0-3 : 2	1	0	0	1	0	0	0	0	0	0	0	0
9	CY3701	Basic Inorganic Chemistry Laboratory - I	0-0-3 : 2	18	0	1	9	6	1	1	0	0	0	0	0
10	EE3700	Electrical Machines Laboratory	0-0-2 : 1	1	1	0	0	0	0	0	0	0	0	0	0
11	PH2071	Electricity and Magnetism Laboratory	0-0-2 : 1	17	0	11	4	2	0	0	0	0	0	0	0

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GRADE STATISTICS REPORT (INTEGRATED M.SC. : 2021-22 - AUTUMN : 7TH SEMESTER)   24-Dec-2021

CY5 : Chemistry

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
1	CY4101	Stereochemistry and Reaction Mechanism	3-1-0 : 4	16	0	2	6	6	2	0	0	0	0	0	0
2	CY4201	Main Group and Organometallic Chemistry	3-1-0 : 4	16	0	3	10	3	0	0	0	0	0	0	0
3	CY4301	Quantum Chemistry	3-1-0 : 4	16	1	9	5	1	0	0	0	0	0	0	0
4	CY4303	Chemical Applications of Group Theory	3-0-0 : 3	16	2	5	6	3	0	0	0	0	0	0	0
5	CY4701	Organic Compounds Preparations Laboratory	0-0-3 : 2	16	0	12	4	0	0	0	0	0	0	0	0
6	CY4703	Physical Chemistry Laboratory	0-0-3 : 2	16	4	7	3	1	1	0	0	0	0	0	0
7	CY4705	Materials Synthesis Laboratory	0-0-3 : 2	16	8	4	2	2	0	0	0	0	0	0	0

LS5 : Life Science

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
1	LS4103	Biochemistry	3-0-0 : 3	7	1	0	5	1	0	0	0	0	0	0	0
2	LS4301	Bioanalytical Techniques	3-0-0 : 3	7	0	0	1	3	2	1	0	0	0	0	0
3	LS4407	Cell Biology	3-0-0 : 3	7	1	0	1	2	3	0	0	0	0	0	0
4	LS4602	Microbiology	3-0-0 : 3	7	1	0	1	5	0	0	0	0	0	0	0
5	LS4391	Bioanalytical Techniques Laboratory	0-0-3 : 2	7	0	3	4	0	0	0	0	0	0	0	0
6	LS4491	Cell Biology Laboratory	0-0-3 : 2	7	1	1	5	0	0	0	0	0	0	0	0
7	LS4691	Microbiology Laboratory	0-0-3 : 2	7	1	1	3	2	0	0	0	0	0	0	0

MA5 : Mathematics

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
1	MA4101	Real Analysis: Series of Functions and Calculus of Several Variables	3-1-0 : 4	16	0	0	2	10	3	1	0	0	0	0	0
2	MA4103	Complex Analysis - II	3-1-0 : 4	16	1	2	6	5	2	0	0	0	0	0	0
3	MA4107	Linear Algebra	3-1-0 : 4	16	0	0	5	11	0	0	0	0	0	0	0
4	MA4305	Numerical Analysis - II	3-1-0 : 4	15	0	1	4	7	2	1	0	0	0	0	0
5	EE3300	Principles of Control Systems Engineering	3-0-0 : 3	2	1	1	0	0	0	0	0	0	0	0	0
6	ME3262	Advanced Manufacturing Processes	3-0-0 : 3	1	0	0	1	0	0	0	0	0	0	0	0
7	PH4007	Quantum Mechanics and Applications	3-0-0 : 3	1	0	0	0	1	0	0	0	0	0	0	0
8	MA4373	Numerical Methods Laboratory	1-2-2 : 2	16	0	6	9	1	0	0	0	0	0	0	0

PH5 : Physics

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
1	PH4001	Mathematical Methods in Physics	3-1-0 : 4	14	1	6	4	3	0	0	0	0	0	0	0
2	PH4002	Electrodynamics	3-1-0 : 4	15	0	3	0	3	6	3	0	0	0	0	0
3	PH4003	Classical Mechanics	3-1-0 : 4	15	0	3	7	5	0	0	0	0	0	0	0
4	PH4005	Quantum Mechanics - I	3-1-0 : 4	15	0	1	0	5	9	0	0	0	0	0	0
5	EE3300	Principles of Control Systems Engineering	3-0-0 : 3	1	0	0	1	0	0	0	0	0	0	0	0
6	HS5171	Advanced Language Laboratory	0-0-3 : 2	15	0	6	9	0	0	0	0	0	0	0	0
7	PH4071	Modern Physics Laboratory	0-0-3 : 2	15	1	10	3	1	0	0	0	0	0	0	0

राष्ट्रीय प्रौद्योगिकी संस्थान राउरकेला
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GRADE STATISTICS REPORT (INTEGRATED M.SC. : 2021-22 - AUTUMN : 9TH SEMESTER)   24-Dec-2021

CY5 : Chemistry

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	CY5993	Research Project - I	0-0-0 : 6	11	0	8	3	0	0	0	0	0	0	0	0
2	CY5101	Methods in Organic Synthesis	3-1-0 : 4	11	0	6	5	0	0	0	0	0	0	0	0
3	CY5201	Bioinorganic Chemistry	3-1-0 : 4	11	4	4	2	1	0	0	0	0	0	0	0
4	CY5205	Solid State Chemistry	3-0-0 : 3	9	1	5	3	0	0	0	0	0	0	0	0
5	CY5301	Statistical Thermodynamics	3-0-0 : 3	2	1	0	0	0	1	0	0	0	0	0	0
6	CY5701	Environmental Chemistry	0-0-3 : 2	11	1	2	8	0	0	0	0	0	0	0	0
7	CY5881	Seminar and Technical Writing	0-0-3 : 2	10	0	4	6	0	0	0	0	0	0	0	0

LS5 : Life Science

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	LS5993	Research Project - I	0-0-0 : 6	5	0	4	0	1	0	0	0	0	0	0	0
2	LS5410	Molecular Genetics	3-0-0 : 3	5	0	2	1	2	0	0	0	0	0	0	0
3	LS5502	Immunotechniques	3-0-0 : 3	5	0	0	1	3	0	1	0	0	0	0	0
4	LS5604	Ecology and Environmental Sciences	3-0-0 : 3	5	0	0	4	1	0	0	0	0	0	0	0
5	LS5591	Immunology Laboratory	0-0-3 : 2	5	1	4	0	0	0	0	0	0	0	0	0
6	LS5881	Seminar and Technical Writing	0-0-3 : 2	5	1	1	2	1	0	0	0	0	0	0	0

MA5 : Mathematics

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	MA5993	Research Project - I	0-0-0 : 6	10	0	1	7	2	0	0	0	0	0	0	0
2	MA5101	Functional Analysis	3-0-0 : 3	11	0	0	0	5	4	2	0	0	0	0	0
3	MA5118	Lie Algebra	3-0-0 : 3	11	0	2	5	4	0	0	0	0	0	0	0
4	MA5303	Partial Differential Equations	3-0-0 : 3	11	0	0	0	0	3	8	0	0	0	0	0
5	MA5332	Fluid Dynamics	3-0-0 : 3	11	0	2	9	0	0	0	0	0	0	0	0
6	MA5881	Seminar and Technical Writing	0-0-3 : 2	11	0	3	8	0	0	0	0	0	0	0	0

PH5 : Physics

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	PH5993	Research Project - I	0-0-0 : 6	14	0	5	9	0	0	0	0	0	0	0	0
2	PH5001	Nuclear and Particle Physics	3-1-0 : 4	14	0	0	2	4	5	3	0	0	0	0	0
3	PH4074	Computational Physics Laboratory	1-0-3 : 3	14	2	6	4	1	1	0	0	0	0	0	0
4	PH5006	Analog and Digital Electronics	3-0-0 : 3	14	2	6	4	2	0	0	0	0	0	0	0
5	PH6111	Advanced Quantum Mechanics	3-0-0 : 3	2	0	0	0	1	0	1	0	0	0	0	0
6	PH6114	Non – Linear Dynamics, Chaos and Its Recent Applications	3-0-0 : 3	1	0	0	1	0	0	0	0	0	0	0	0
7	PH6117	Introduction To Astrophysics	3-0-0 : 3	14	1	5	3	4	1	0	0	0	0	0	0
8	PH6234	Laser Physics	3-0-0 : 3	3	0	1	2	0	0	0	0	0	0	0	0
9	PH6466	Low Temperature Properties of Matter	3-0-0 : 3	8	0	2	5	1	0	0	0	0	0	0	0
10	PH5881	Seminar and Technical Writing	0-0-3 : 2	15	0	3	6	4	1	0	0	0	1	0	0

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GRADE STATISTICS REPORT (B.TECH. M.TECH DUAL DEGREE : 2021-22 - AUTUMN : 3RD SEMESTER)   24-Dec-2021

CH1 : Chemical Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	CH2111	Fluid Dynamics	3-1-0 : 4	11	0	3	2	6	0	0	0	0	0	0	0
2	MA2305	Numerical Analysis	3-1-0 : 4	11	0	4	3	3	1	0	0	0	0	0	0
3	CH2211	Chemical Process Calculations	2-1-0 : 3	11	0	0	10	1	0	0	0	0	0	0	0
4	CH2411	Chemical Engineering Thermodynamics	3-0-0 : 3	11	0	0	2	8	1	0	0	0	0	0	0
5	EC2610	Fundamentals of Signals and Systems	2-1-0 : 3	1	0	0	1	0	0	0	0	0	0	0	0
6	HS1331	Introduction to Society and Culture	3-0-0 : 3	5	0	0	5	0	0	0	0	0	0	0	0
7	HS1340	Principles of Economics	3-0-0 : 3	5	0	1	3	1	0	0	0	0	0	0	0
8	MM2308	Iron Making and Steel Making	3-0-0 : 3	2	0	0	1	0	1	0	0	0	0	0	0
9	CH2471	Biochemical Engineering Laboratory	0-0-3 : 2	11	0	10	1	0	0	0	0	0	0	0	0
10	CH2271	Process Technology Laboratory	0-0-2 : 1	11	0	8	2	1	0	0	0	0	0	0	0
11	EC2700	Basic Electronics Laboratory	0-0-2 : 1	11	0	3	3	4	1	0	0	0	0	0	0

CR2 : Industrial Ceramic

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	MA2203	Introduction to Probability and Statistics	3-1-0 : 4	9	0	4	4	1	0	0	0	0	0	0	0
2	CR2101	Materials Thermodynamics	3-0-0 : 3	9	0	0	2	3	3	1	0	0	0	0	0
3	CR2401	Unit Operations in Ceramic Processing	3-0-0 : 3	9	0	1	6	2	0	0	0	0	0	0	0
4	CR2403	Ceramic Raw Materials	3-0-0 : 3	9	0	0	2	6	1	0	0	0	0	0	0
5	HS1317	Introduction to the Metaphysics of Sanskrit Language	3-0-0 : 3	1	0	0	0	0	0	1	0	0	0	0	0
6	HS1321	Introduction to Psychology	3-0-0 : 3	1	0	0	1	0	0	0	0	0	0	0	0
7	HS1331	Introduction to Society and Culture	3-0-0 : 3	1	0	0	0	1	0	0	0	0	0	0	0
8	HS1340	Principles of Economics	3-0-0 : 3	6	0	2	3	1	0	0	0	0	0	0	0
9	MM2308	Iron Making and Steel Making	3-0-0 : 3	1	0	0	0	0	1	0	0	0	0	0	0
10	CR2410	Chemical Analysis Laboratory	0-0-3 : 2	9	1	2	2	3	0	1	0	0	0	0	0
11	CR2405	Unit Operations Laboratory	0-0-2 : 1	9	0	4	3	2	0	0	0	0	0	0	0
12	EC2700	Basic Electronics Laboratory	0-0-2 : 1	9	0	1	5	3	0	0	0	0	0	0	0

MM1 : Metallurgical and Materials Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	MA2305	Numerical Analysis	3-1-0 : 4	12	0	6	4	1	0	1	0	0	0	0	0
2	MM2301	Metallurgical Thermodynamics and Kinetics	3-1-0 : 4	11	0	3	3	3	1	1	0	0	0	0	0
3	HS1321	Introduction to Psychology	3-0-0 : 3	1	0	0	0	1	0	0	0	0	0	0	0
4	HS1331	Introduction to Society and Culture	3-0-0 : 3	3	0	1	2	0	0	0	0	0	0	0	0
5	HS1340	Principles of Economics	3-0-0 : 3	7	0	0	3	3	1	0	0	0	0	0	0
6	ME2261	Basic Manufacturing Processes	3-0-0 : 3	1	0	0	0	1	0	0	0	0	0	0	0
7	MM2302	Transport Phenomena	3-0-0 : 3	12	1	1	10	0	0	0	0	0	0	0	0
8	MM2306	Non Ferrous Metal Extraction-Principle and Practice	3-0-0 : 3	12	1	1	2	2	4	2	0	0	0	0	0
9	PH2007	Electrostatics and Magnetostatics	3-0-0 : 3	1	0	1	0	0	0	0	0	0	0	0	0
10	EC2700	Basic Electronics Laboratory	0-0-2 : 1	12	3	4	3	1	0	1	0	0	0	0	0
11	MM2321	Mineral Dressing	0-0-2 : 1	12	2	3	5	1	1	0	0	0	0	0	0
12	MM2511	Polymer and Composite Laboratory	0-0-2 : 1	12	1	3	2	4	1	1	0	0	0	0	0

MN1 : Mining Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	MA2203	Introduction to Probability and Statistics	3-1-0 : 4	11	0	6	4	0	1	0	0	0	0	0	0
2	CE2003	Mechanics of Solids	3-0-0 : 3	11	0	0	3	2	1	3	0	0	2	0	0
3	ER2251	Mining Geology	3-0-0 : 3	11	1	4	5	1	0	0	0	0	0	0	0
4	HS1317	Introduction to the Metaphysics of Sanskrit Language	3-0-0 : 3	2	0	0	1	0	1	0	0	0	0	0	0
5	HS1321	Introduction to Psychology	3-0-0 : 3	1	0	0	1	0	0	0	0	0	0	0	0
6	HS1331	Introduction to Society and Culture	3-0-0 : 3	1	0	0	1	0	0	0	0	0	0	0	0

#		Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
7	HS1340	Principles of Economics	3-0-0 : 3	7	0	2	5	0	0	0	0	0	0	0	0
8	MM2308	Iron Making and Steel Making	3-0-0 : 3	1	0	0	0	1	0	0	0	0	0	0	0
9	MN2001	Mine Development	3-0-0 : 3	11	0	2	3	6	0	0	0	0	0	0	0
10	ER2271	Mining Geology Laboratory	0-0-3 : 2	11	0	0	1	7	3	0	0	0	0	0	0
11	EE2700	Basic Electrical Engineering Laboratory	0-0-2 : 1	11	1	0	3	7	0	0	0	0	0	0	0
12	HS1270	Language Laboratory	0-0-2 : 1	11	1	6	3	0	1	0	0	0	0	0	0

GRADE STATISTICS REPORT (B.TECH. M.TECH DUAL DEGREE : 2021-22 - AUTUMN : 5TH SEMESTER)   24-Dec-2021

CH1 : Chemical Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	CH3111	Process Equipment Design	3-1-0 : 4	11	0	0	5	2	3	1	0	0	0	0	0
2	CH3113	Mass Transfer Operations– II	3-0-0 : 3	11	1	0	2	5	2	1	0	0	0	0	0
3	CH3215	Processing and Handling of Materials	3-0-0 : 3	11	0	0	3	4	2	2	0	0	0	0	0
4	CH3217	Chemical Process Technology	3-0-0 : 3	11	0	3	7	1	0	0	0	0	0	0	0
5	CH3311	Chemical Engineering Mathematics	3-0-0 : 3	11	0	0	0	3	7	1	0	0	0	0	0
6	CH3171	Heat Transfer Operations Laboratory	0-0-3 : 2	11	1	7	3	0	0	0	0	0	0	0	0
7	CH3275	Chemical Reaction Engineering Laboratory	0-0-3 : 2	11	0	1	3	5	2	0	0	0	0	0	0
8	CH3471	Fuels and Combustion Laboratory	0-0-2 : 1	11	0	5	1	5	0	0	0	0	0	0	0

CR2 : Industrial Ceramic

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	CR3101	Physical Ceramics: Properties	3-0-0 : 3	10	1	3	2	3	1	0	0	0	0	0	0
2	CR3103	Application of Phase Diagram	3-0-0 : 3	10	0	1	4	4	1	0	0	0	0	0	0
3	CR3105	Heat Transfer and Fluid Flow	3-0-0 : 3	10	0	1	2	3	3	1	0	0	0	0	0
4	CR3201	Instrumental Characterization	3-0-0 : 3	11	1	2	4	2	2	0	0	0	0	0	0
5	CR3401	Refractory Technology	3-0-0 : 3	11	0	1	1	4	2	2	0	0	1	0	0
6	CR3203	Instrumental Characterization Laboratory	0-0-3 : 2	10	1	0	1	3	5	0	0	0	0	0	0
7	CR3403	Refractory Laboratory	0-0-3 : 2	10	4	3	1	2	0	0	0	0	0	0	0
8	CR3205	MATLAB and Simulink Laboratory	0-0-2 : 1	10	1	7	1	0	1	0	0	0	0	0	0

MM1 : Metallurgical and Materials Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
1	MM3102	Phase Transformation	3-0-0 : 3	9	0	5	3	1	0	0	0	0	0	0	0
2	MM3201	Deformation Behavior of Materials	3-0-0 : 3	9	0	2	4	1	2	0	0	0	0	0	0
3	MM3304	Steel Making	3-0-0 : 3	9	0	1	4	2	2	0	0	0	0	0	0
4	MM3505	Advances in Materials	3-0-0 : 3	9	0	3	5	1	0	0	0	0	0	0	0
5	SM6611	Business Research Methodology	3-0-0 : 3	8	0	3	5	0	0	0	0	0	0	0	0
6	MM3121	Metallography Laboratory	0-0-3 : 2	8	0	6	2	0	0	0	0	0	0	0	0
7	MM3421	Computational Metallurgy Laboratory	0-0-2 : 1	8	2	2	4	0	0	0	0	0	0	0	0
8	MM3521	Characterization of Materials Laboratory	0-0-2 : 1	8	2	4	2	0	0	0	0	0	0	0	0

MN1 : Mining Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
1	EC3510	Fundamentals of Communication Systems	3-0-0 : 3	1	0	1	0	0	0	0	0	0	0	0	0
2	ME3161	Mechanics of Materials	3-0-0 : 3	1	1	0	0	0	0	0	0	0	0	0	0
3	MN3001	Mining Machinery	3-0-0 : 3	12	0	4	4	2	0	2	0	0	0	0	0
4	MN3005	Mine Economics	3-0-0 : 3	11	0	2	6	2	1	0	0	0	0	0	0
5	MN3101	Underground Metal Mining	3-0-0 : 3	12	0	2	5	5	0	0	0	0	0	0	0
6	MN3203	Underground Hazards and Rescue	3-0-0 : 3	12	1	8	3	0	0	0	0	0	0	0	0
7	MN3207	Coal and Mineral Processing Technology	3-0-0 : 3	11	1	5	4	1	0	0	0	0	0	0	0
8	MN3272	Hazard and Rescue Laboratory	0-0-3 : 2	12	2	9	1	0	0	0	0	0	0	0	0
9	MN3273	Coal and Mineral Processing Laboratory	0-0-3 : 2	12	3	6	1	2	0	0	0	0	0	0	0
10	EC3710	Electronics Circuit Design Laboratory	0-0-2 : 1	1	0	0	0	1	0	0	0	0	0	0	0
11	ME3071	Basic Mechanical Engineering Laboratory	0-0-2 : 1	1	0	0	1	0	0	0	0	0	0	0	0
12	MN3073	Mining Machinery Laboratory	0-0-2 : 1	12	1	5	6	0	0	0	0	0	0	0	0

राष्ट्रीय प्रौद्योगिकी संस्थान राउरकेला

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GRADE STATISTICS REPORT (B.TECH. M.TECH DUAL DEGREE : 2021-22 - AUTUMN : 7TH SEMESTER)   24-Dec-2021

CH1 : Chemical Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
1	CH4311	Process Modeling and Simulation	3-0-0 : 3	11	0	0	5	6	0	0	0	0	0	0	0
2	CH4317	Project Engineering	3-0-0 : 3	11	0	0	3	6	1	1	0	0	0	0	0
3	CH6101	Advanced Fluid Dynamics	3-0-0 : 3	11	0	1	0	6	4	0	0	0	0	0	0
4	CH6103	Advanced Mass Transfer	3-0-0 : 3	11	0	0	8	2	1	0	0	0	0	0	0
5	CH5991	Research Project - I	0-0-0 : 2	10	0	1	6	3	0	0	0	0	0	0	0
6	CH4271	Materials Handling Laboratory	0-0-2 : 1	11	0	4	5	2	0	0	0	0	0	0	0
7	CH4371	Process Plant Simulation Laboratory	0-0-2 : 1	11	0	1	2	5	3	0	0	0	0	0	0

CR2 : Industrial Ceramic

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
1	CR4107	Mechanical Behaviour of Ceramics	3-0-0 : 3	7	1	2	3	0	1	0	0	0	0	0	0
2	CR4401	Industrial Applications of Refractories	3-0-0 : 3	6	0	0	2	1	0	3	0	0	0	0	0
3	CR6333	Ceramics in Energy Sectors	3-0-0 : 3	6	2	0	2	1	1	0	0	0	0	0	0
4	CR6401	Oxide and Non-Oxide Ceramics	3-0-0 : 3	7	1	1	0	1	1	2	0	0	1	0	0
5	MM3207	Mechanical Metallurgy	3-0-0 : 3	1	1	0	0	0	0	0	0	0	0	0	0
6	CR4103	Mechanical Testing Laboratory	0-0-3 : 2	7	2	3	2	0	0	0	0	0	0	0	0
7	CR5991	Research Project - I	0-0-0 : 2	7	0	0	3	3	1	0	0	0	0	0	0
8	CR4202	Finite Element Laboratory	0-0-2 : 1	7	3	0	2	1	0	1	0	0	0	0	0

MM1 : Metallurgical and Materials Engineering

#	Subject	Subject Name	L-T-P : Credit	No.	Grade Distribution										

-43-

	Code			Enrolled	EX	A	B	C	D	P	S	U	F	X	I
1	EC4310	Principles of Electronic Instrumentation	3-0-0 : 3	1	0	1	0	0	0	0	0	0	0	0	0
2	EE3300	Principles of Control Systems Engineering	3-0-0 : 3	1	0	0	1	0	0	0	0	0	0	0	0
3	ME3262	Advanced Manufacturing Processes	3-0-0 : 3	1	0	1	0	0	0	0	0	0	0	0	0
4	MM4108	Stainless steel Technologies	3-0-0 : 3	7	0	0	6	1	0	0	0	0	0	0	0
5	MM4509	Nanostructured Materials	3-0-0 : 3	5	0	3	0	2	0	0	0	0	0	0	0
6	MM4510	Advanced Processing of Materials	3-0-0 : 3	6	1	1	3	1	0	0	0	0	0	0	0
7	MM5211	Mechanical Working of Metallic Materials	3-0-0 : 3	9	2	3	4	0	0	0	0	0	0	0	0
8	MM5523	Surface Engineering	3-0-0 : 3	9	1	3	5	0	0	0	0	0	0	0	0
9	MM5991	Research Project - I	0-0-0 : 2	8	2	3	2	1	0	0	0	0	0	0	0
10	MM4423	Atomistic Modelling of Materials Laboratory	0-0-2 : 1	9	1	0	8	0	0	0	0	0	0	0	0
11	MM4521	Electrometallurgy and Corrosion Laboratory	0-0-2 : 1	9	2	4	3	0	0	0	0	0	0	0	0

MN1 : Mining Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	ME3262	Advanced Manufacturing Processes	3-0-0 : 3	2	1	1	0	0	0	0	0	0	0	0	0
2	MN4021	Mine Planning and Design	3-0-0 : 3	7	2	3	2	0	0	0	0	0	0	0	0
3	MN5002	Computer Application in Mining	3-0-0 : 3	7	1	4	2	0	0	0	0	0	0	0	0
4	MN6035	Mine Systems Engineering	3-0-0 : 3	8	0	1	3	4	0	0	0	0	0	0	0
5	MN6122	Rock Slope Technology	3-0-0 : 3	1	0	1	0	0	0	0	0	0	0	0	0
6	MN6201	Environmental Control and Management	3-0-0 : 3	8	1	3	3	1	0	0	0	0	0	0	0
7	MN5023	Computer Application in Mining Laboratory	0-0-3 : 2	8	1	6	0	1	0	0	0	0	0	0	0
8	MN5991	Research Project - I	0-0-0 : 2	8	1	7	0	0	0	0	0	0	0	0	0
9	MN6171	Geotechnical Laboratory	0-0-3 : 2	8	3	2	3	0	0	0	0	0	0	0	0

राष्ट्रीय प्रौद्योगिकी संस्थान राउरकेला

NATIONAL INSTITUTE OF TECHNOLOGY ROURKELA

GRADE STATISTICS REPORT (B.TECH. M.TECH DUAL DEGREE : 2021-22 - AUTUMN : 9TH SEMESTER)   24-Dec-2021

CH1 : Chemical Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	CH5995	Research Project - IV	0-0-0 : 8	9	0	4	4	1	0	0	0	0	0	0	0
2	CH5993	Research Project - III (Summer)	0-0-0 : 4	10	0	5	2	3	0	0	0	0	0	0	0
3	CH6233	Principles of Analytical and Characterization Instruments	3-0-0 : 3	10	1	4	2	2	1	0	0	0	0	0	0
4	CH6532	Safety in Chemical industries	3-0-0 : 3	10	2	6	1	1	0	0	0	0	0	0	0

CR2 : Industrial Ceramic

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	CR5995	Research Project - IV	0-0-0 : 8	10	0	2	2	3	3	0	0	0	0	0	0
2	CR5993	Research Project - III (Summer)	0-0-0 : 4	10	0	3	3	4	0	0	0	0	0	0	0
3	CR6134	Electron Microscopy	3-0-0 : 3	10	0	3	3	4	0	0	0	0	0	0	0
4	CR6201	Advanced Bio-Ceramics	3-0-0 : 3	10	0	2	2	5	1	0	0	0	0	0	0

CS1 : Computer Science

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	CS6316	Internet of Things	3-0-0 : 3	1	0	0	1	0	0	0	0	0	0	0	0

MM1 : Metallurgical and Materials Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	MM5995	Research Project - IV	0-0-0 : 8	8	1	2	4	1	0	0	0	0	0	0	0

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
2	MM5993	Research Project - III (Summer)	0-0-0 : 4	8	1	7	0	0	0	0	0	0	0	0	0
3	MM5222	Fracture, Fatigue and Wear of Metals	3-0-0 : 3	8	0	2	0	0	4	2	0	0	0	0	0
4	MM6521	Powder Technology	3-0-0 : 3	8	1	3	2	1	1	0	0	0	0	0	0

MN1 : Mining Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	MN5995	Research Project - IV	0-0-0 : 8	9	1	6	2	0	0	0	0	0	0	0	0
2	MN5993	Research Project - III (Summer)	0-0-0 : 4	9	1	8	0	0	0	0	0	0	0	0	0
3	MN4021	Mine Planning and Design	3-0-0 : 3	9	1	1	7	0	0	0	0	0	0	0	0
4	MN6254	Mine Fires and spontaneous heating	3-0-0 : 3	9	1	4	4	0	0	0	0	0	0	0	0

Department of Electrical Engineering

Specialization: Electronic Systems & Communication

The student bearing the roll no:712EE1073, Name: Nisant Nihar has secured the following grade in the departmental evaluation carried on 14.12.21

Subject Code	Subject Name	Marks	Grade
EE 657	Seminar &Technical Writing -II	82	A
EE 594	Research Project III	73	B

Members of Evaluation Committee

Prof.P.K.Sahu (Chairman)

Prof.(specialization) 14/12/2021

Submitted for necessary action

To

Associate Dean(AC)

To
DR(AC)
Kindly take necessary action Release the 1 Grant
of EE594 & enter the
new mark submitted by the
Dept.

राष्ट्रीय प्रौद्योगिकी संस्थान राउरकेला
NATIONAL INSTITUTE OF TECHNOLOGY ROURKELA

GRADE STATISTICS REPORT (M.TECH. : 2021-22 - AUTUMN : 1ST SEMESTER)   24-Dec-2021

BM1 : Biomedical Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
1	BM6031	Anatomy and Physiology	3-0-0 : 3	20	4	6	5	0	0	0	0	0	5	0	0
2	BM6133	Nanotechnology in Medical Applications	3-0-0 : 3	20	0	2	8	3	2	0	0	0	5	0	0
3	BM6231	Computational Methods in Biomedical Engineering	3-0-0 : 3	20	1	3	7	4	0	0	0	0	5	0	0
4	BM6301	Biomedical Signal Processing	3-0-0 : 3	20	2	2	8	2	1	0	0	0	5	0	0
5	BM6303	Biomedical Instrumentation	3-0-0 : 3	20	1	3	5	5	1	0	0	0	5	0	0
6	BM6371	Biomedical Signal Processing Laboratory	0-0-3 : 2	20	2	9	4	0	0	0	0	0	5	0	0
7	BM6373	Biomedical Instrumentation Laboratory	0-0-3 : 2	20	3	9	3	0	0	0	0	0	5	0	0

Remarks (BM1) :

#	Subject Code	RollNo	Student Name	Given Grade	Revised Grade	Revised Grade Reason

BM2 : Biotechnology

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
1	BM6133	Nanotechnology in Medical Applications	3-0-0 : 3	22	0	1	10	9	1	0	0	0	1	0	0
2	BM6401	Advanced Recombinant DNA Technology	3-0-0 : 3	22	1	7	8	4	1	0	0	0	1	0	0
3	BM6501	Bioprocess Engineering	3-0-0 : 3	22	0	11	9	1	0	1	0	0	0	0	0
4	BM6631	Industrial Biotechnology	3-0-0 : 3	22	0	6	12	2	1	0	0	0	1	0	0
5	BM6633	Advanced Environmental Biotechnology	3-0-0 : 3	22	0	1	15	5	0	0	0	0	1	0	0
6	BM6471	Advanced Cell and Molecular Engineering Laboratory	0-0-3 : 2	22	3	3	8	7	0	0	0	0	1	0	0
7	BM6573	Bioprocess Engineering Laboratory	0-0-3 : 2	22	1	19	1	1	0	0	0	0	0	0	0

Remarks (BM2) :

#	Subject Code	RollNo	Student Name	Given Grade	Revised Grade	Revised Grade Reason

CE1 : Geotechnical Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
1	CE6101	Advanced Soil Mechanics	3-0-0 : 3	25	4	6	9	1	0	0	0	0	5	0	0
2	CE6103	Soil-Structure Interaction	3-0-0 : 3	25	4	7	7	2	0	0	0	0	5	0	0
3	CE6105	Soil Exploration and Analysis of Foundations	3-0-0 : 3	25	0	4	8	4	3	1	0	0	5	0	0
4	CE6132	Environmental Geotechinics	3-0-0 : 3	25	1	4	7	7	1	0	0	0	5	0	0
5	CE6133	Earthquake Geotechnical Engineering	3-0-0 : 3	25	0	3	6	10	1	0	0	0	5	0	0
6	CE6171	Geotechnical Engineering Laboratory	0-0-3 : 2	25	3	7	8	2	0	0	0	0	5	0	0
7	CE6271	Computational Laboratory	0-0-3 : 2	25	1	3	11	4	0	1	0	0	5	0	0

Remarks (CE1) :

#	Subject Code	RollNo	Student Name	Given Grade	Revised Grade	Revised Grade Reason

CE2 : Structural Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
1	CE6001	Applied Elasticity and Plasticity	3-0-0 : 3	26	0	7	8	6	3	0	0	0	2	0	0
2	CE6201	Matrix Method of Structural Analysis	3-0-0 : 3	26	2	6	5	8	3	0	0	0	2	0	0
3	CE6203	Analysis and Design of Plates and Shells	3-0-0 : 3	26	2	8	7	7	0	1	0	0	1	0	0
4	CE6231	Structural Dynamics	3-0-0 : 3	26	0	2	3	10	7	2	0	0	2	0	0
5	CE6233	Composite Structures	3-0-0 : 3	26	3	8	6	2	5	0	0	0	2	0	0
6	CE6271	Computational Laboratory	0-0-3 : 2	26	5	9	7	3	0	0	0	0	2	0	0
7	CE6273	Structural Engineering Laboratory	0-0-3 : 2	26	1	11	12	0	0	0	0	0	2	0	0

Remarks (CE2) :

#	Subject Code	RollNo	Student Name	Given Grade	Revised Grade	Revised Grade Reason

CE3 : Transportation Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	CE6105	Soil Exploration and Analysis of Foundations	3-0-0 : 3	25	3	9	10	1	2	0	0	0	0	0	0
2	CE6301	Transportation Systems Planning	3-0-0 : 3	25	3	7	11	2	1	1	0	0	0	0	0
3	CE6303	Highway and Airport Pavement Materials	3-0-0 : 3	25	1	9	11	2	2	0	0	0	0	0	0
4	CE6305	Traffic Engineering	3-0-0 : 3	25	0	6	12	5	2	0	0	0	0	0	0
5	CE6330	Planning and Design of Airports	3-0-0 : 3	25	2	6	10	3	4	0	0	0	0	0	0
6	CE6271	Computational Laboratory	0-0-3 : 2	25	3	16	5	0	0	0	0	0	1	0	0
7	CE6371	Transportation Engineering Laboratory	0-0-3 : 2	25	1	11	11	1	0	1	0	0	0	0	0

Remarks (CE3) :

#	Subject Code	RollNo	Student Name	Given Grade	Revised Grade	Revised Grade Reason

CE4 : Water Resources Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	CE6401	Hydrologic Elements and Analysis	3-0-0 : 3	25	2	3	12	4	2	1	0	0	1	0	0
2	CE6403	Computational Fluid Dynamics	3-0-0 : 3	25	5	11	7	0	1	0	0	0	1	0	0
3	CE6405	Water Resources Management	3-0-0 : 3	25	1	6	8	4	5	0	0	0	1	0	0
4	CE6431	Advanced Fluid Mechanics	3-0-0 : 3	25	2	7	11	4	0	0	0	0	1	0	0
5	CE6436	Fluvial Hydraulics	3-0-0 : 3	25	3	6	10	5	0	0	0	0	1	0	0
6	CE6471	Hydraulic Engineering Laboratory	0-0-3 : 2	25	6	11	7	0	0	0	0	0	1	0	0
7	CE6473	Computer Application in WR Engineering - I	0-0-3 : 2	25	4	9	11	0	0	0	0	0	1	0	0

Remarks (CE4) :

#	Subject Code	RollNo	Student Name	Given Grade	Revised Grade	Revised Grade Reason

CH1 : Chemical Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	CH6101	Advanced Fluid Dynamics	3-0-0 : 3	3	0	0	0	1	0	0	0	0	2	0	0
2	CH6103	Advanced Mass Transfer	3-0-0 : 3	3	0	0	0	1	0	0	0	0	2	0	0
3	CH6105	Advanced Heat Transfer	3-0-0 : 3	3	0	0	3	0	0	0	0	0	0	0	0
4	CH6233	Principles of Analytical and Characterization Instruments	3-0-0 : 3	3	0	0	1	0	0	0	0	0	2	0	0
5	CH6433	Environmental Management System	3-0-0 : 3	2	0	0	0	1	0	0	0	0	1	0	0
6	CH6532	Safety in Chemical industries	3-0-0 : 3	1	0	0	0	0	0	0	0	0	1	0	0
7	CH6171	Advanced Chemical Engineering Laboratory	0-0-3 : 2	3	0	1	0	0	0	0	0	0	2	0	0
8	CH6371	Process Simulation Laboratory	0-0-3 : 2	3	0	1	0	0	0	0	0	0	2	0	0

Remarks (CH1) :

#	Subject Code	RollNo	Student Name	Given Grade	Revised Grade	Revised Grade Reason

CH3 : Energy and Environmental Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	CH6105	Advanced Heat Transfer	3-0-0 : 3	25	0	2	23	0	0	0	0	0	0	0	0
2	CH6233	Principles of Analytical and Characterization Instruments	3-0-0 : 3	4	1	1	0	1	0	0	0	0	1	0	0
3	CH6301	Modeling and Analysis of Energy Systems	3-0-0 : 3	25	2	14	7	0	0	0	0	0	2	0	0
4	CH6431	Bioenergy Engineering	3-0-0 : 3	21	0	3	10	4	1	1	0	0	2	0	0
5	CH6433	Environmental Management System	3-0-0 : 3	25	0	3	10	6	4	0	0	0	2	0	0
6	CH6532	Safety in Chemical industries	3-0-0 : 3	25	1	9	11	1	0	1	0	0	2	0	0
7	CH6371	Process Simulation Laboratory	0-0-3 : 2	25	0	19	1	1	0	0	0	0	4	0	0
8	CH6471	Environmental Monitoring and Control Laboratory	0-0-3 : 2	25	0	16	6	0	1	0	0	0	2	0	0

Remarks (CH3) :

#	Subject Code	RollNo	Student Name	Given Grade	Revised Grade	Revised Grade Reason

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CR2 : Industrial Ceramics

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	CR6101	Sintering and Microstructure	3-0-0 : 3	1	0	0	0	1	0	0	0	0	0	0	0
2	CR6131	Testing and Characterization	3-0-0 : 3	1	0	1	0	0	0	0	0	0	0	0	0
3	CR6333	Ceramics in Energy Sectors	3-0-0 : 3	1	0	0	0	1	0	0	0	0	0	0	0
4	CR6401	Oxide and Non-Oxide Ceramics	3-0-0 : 3	1	0	0	1	0	0	0	0	0	0	0	0
5	CR6431	Glass Science	3-0-0 : 3	1	0	0	1	0	0	0	0	0	0	0	0
6	CR6173	Testing and Characterization Laboratory	0-0-3 : 2	1	0	1	0	0	0	0	0	0	0	0	0
7	CR6175	Electrical and Electrochemical Characterization of Ceramics Laboratory	0-0-3 : 2	1	0	0	1	0	0	0	0	0	0	0	0

Remarks (CR2) :

#	Subject Code	RollNo	Student Name	Given Grade	Revised Grade	Revised Grade Reason

CS1 : Computer Science

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	CS6101	Computer Architecture	3-0-0 : 3	26	0	1	3	16	4	1	0	0	1	0	0
2	CS6103	Data Structure and Algorithm Design	3-0-0 : 3	26	1	12	11	0	1	1	0	0	0	0	0
3	CS6128	Cloud Computing	3-0-0 : 3	9	0	7	2	0	0	0	0	0	0	0	0
4	CS6312	Data Warehousing and Mining	3-0-0 : 3	17	0	0	7	4	3	2	0	0	1	0	0
5	CS6316	Internet of Things	3-0-0 : 3	4	0	1	0	2	0	1	0	0	0	0	0
6	CS6401	Advanced Software Engineering	3-0-0 : 3	26	0	4	14	5	2	0	0	0	1	0	0
7	CS6412	Artificial Intelligence	3-0-0 : 3	22	0	6	11	1	3	0	0	0	1	0	0
8	CS6380	Internet of Things Laboratory	0-0-3 : 2	1	0	0	1	0	0	0	0	0	0	0	0
9	CS6381	Advanced Programming Laboratory	0-0-3 : 2	26	2	15	7	0	1	0	0	0	1	0	0
10	CS6471	Advanced Software Engineering Laboratory	0-0-3 : 2	25	3	8	8	5	1	0	0	0	0	0	0

Remarks (CS1) :

#	Subject Code	RollNo	Student Name	Given Grade	Revised Grade	Revised Grade Reason

CS2 : Information Security

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	CS6103	Data Structure and Algorithm Design	3-0-0 : 3	25	3	7	10	3	0	0	0	0	2	0	0
2	CS6128	Cloud Computing	3-0-0 : 3	12	1	4	4	0	2	0	0	0	1	0	0
3	CS6217	Biometric Security	3-0-0 : 3	2	0	0	0	2	0	0	0	0	0	0	0
4	CS6301	Foundations of Computer Security	3-0-0 : 3	25	2	4	9	6	1	1	0	0	2	0	0
5	CS6312	Data Warehousing and Mining	3-0-0 : 3	11	0	0	3	4	3	0	0	0	1	0	0
6	CS6316	Internet of Things	3-0-0 : 3	4	0	0	3	1	0	0	0	0	0	0	0
7	CS6401	Advanced Software Engineering	3-0-0 : 3	25	0	2	8	12	1	0	0	0	2	0	0
8	CS6412	Artificial Intelligence	3-0-0 : 3	21	0	3	10	4	2	0	0	0	2	0	0
9	CS6371	Cryptography Laboratory	0-0-3 : 2	25	7	10	5	1	0	0	0	0	2	0	0
10	CS6381	Advanced Programming Laboratory	0-0-3 : 2	25	1	7	10	3	1	0	0	0	3	0	0

Remarks (CS2) :

#	Subject Code	RollNo	Student Name	Given Grade	Revised Grade	Revised Grade Reason

CS3 : Software Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	CS6103	Data Structure and Algorithm Design	3-0-0 : 3	23	1	7	10	3	0	0	0	0	2	0	0
2	CS6128	Cloud Computing	3-0-0 : 3	14	2	2	4	4	1	0	0	0	1	0	0
3	CS6312	Data Warehousing and Mining	3-0-0 : 3	9	0	0	2	4	2	0	0	0	1	0	0
4	CS6401	Advanced Software Engineering	3-0-0 : 3	23	0	6	10	3	2	0	0	0	2	0	0
5	CS6403	Software Architecture	3-0-0 : 3	23	0	5	8	7	1	0	0	0	2	0	0
6	CS6413	Software Project, Process and Quality Management	3-0-0 : 3	23	1	1	10	8	1	0	0	0	2	0	0
7	CS6471	Advanced Software Engineering Laboratory	0-0-3 : 2	23	2	5	8	6	0	0	0	0	2	0	0

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| 8 | CS6473 | Software Architecture Laboratory | 0-0-3 : 2 | 23 | 4 | 5 | 11 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |

Remarks (CS3) :

#	Subject Code	RollNo	Student Name	Given Grade	Revised Grade	Revised Grade Reason

EC2 : VLSI Design and Embedded Systems

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
1	EC6201	Digital VLSI Design	3-0-0 : 3	25	0	6	5	7	4	0	0	0	3	0	0
2	EC6203	Reconfigurable System Design	3-0-0 : 3	25	3	10	7	2	0	0	0	0	3	0	0
3	EC6205	Integrated Circuit for Digital Signal Processing	3-0-0 : 3	25	0	3	12	4	3	0	0	0	3	0	0
4	EC6213	Micro-Electronic Devices and Applications	3-0-0 : 3	25	0	2	15	4	0	1	0	0	3	0	0
5	EC6303	Advanced Instrumentation and Signal Conditioning	3-0-0 : 3	25	1	3	7	7	2	3	0	0	2	0	0
6	EC6271	VLSI Design Laboratory	0-0-3 : 2	25	4	16	4	1	0	0	0	0	0	0	0
7	EC6275	Reconfigurable System Design Laboratory	0-0-3 : 2	25	2	14	6	0	0	0	0	0	3	0	0

Remarks (EC2) :

#	Subject Code	RollNo	Student Name	Given Grade	Revised Grade	Revised Grade Reason

EC3 : Electronics and Instrumentation Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
1	EC6201	Digital VLSI Design	3-0-0 : 3	21	1	1	5	5	4	3	0	0	2	0	0
2	EC6203	Reconfigurable System Design	3-0-0 : 3	6	2	3	1	0	0	0	0	0	0	0	0
3	EC6301	Industrial Instrumentation	3-0-0 : 3	22	2	3	7	3	4	1	0	0	2	0	0
4	EC6303	Advanced Instrumentation and Signal Conditioning	3-0-0 : 3	22	0	2	6	2	6	3	0	0	3	0	0
5	EC6305	Analytical Instrumentation	3-0-0 : 3	3	0	1	0	0	1	0	0	0	1	0	0
6	EC6601	Advanced Digital Signal Processing	3-0-0 : 3	22	0	1	3	8	2	7	0	0	1	0	0
7	EC6603	Computer Vision	3-0-0 : 3	4	0	0	0	1	2	0	0	0	1	0	0
8	EC6609	Soft Computing	3-0-0 : 3	10	0	2	1	4	2	1	0	0	0	0	0

9	EC6271	VLSI Design Laboratory	0-0-3 : 2	4	0	3	1	0	0	0	0	0	0	0	0
10	EC6275	Reconfigurable System Design Laboratory	0-0-3 : 2	16	1	8	7	0	0	0	0	0	0	0	0
11	EC6277	IoT Laboratory	0-0-3 : 2	1	0	0	1	0	0	0	0	0	0	0	0
12	EC6371	Advanced Instrumentation Laboratory	0-0-3 : 2	14	2	2	3	6	0	0	0	0	1	0	0
13	EC6373	Virtual and Intelligent Instrumentation Laboratory	0-0-3 : 2	5	0	2	1	0	1	0	0	0	1	0	0
14	EC6673	Computer Vision Laboratory	0-0-3 : 2	4	1	1	1	0	0	0	0	0	1	0	0

Remarks (EC3) :

#	Subject Code	RollNo	Student Name	Given Grade	Revised Grade	Revised Grade Reason

EC5 : Communication and Networks

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
1	EC6203	Reconfigurable System Design	3-0-0 : 3	19	3	10	3	2	0	0	0	0	1	0	0
2	EC6403	Modern Radar Systems	3-0-0 : 3	3	1	1	0	1	0	0	0	0	0	0	0
3	EC6501	Data Communication Networks	3-0-0 : 3	23	0	7	13	2	0	0	0	0	1	0	0
4	EC6503	Statistical Signal Theory	3-0-0 : 3	23	2	7	7	3	2	1	0	0	1	0	0
5	EC6505	Advanced Digital Communication	3-0-0 : 3	23	1	8	3	6	4	0	0	0	1	0	0
6	EC6515	Mobile Communication	3-0-0 : 3	19	2	6	9	1	0	0	0	0	1	0	0
7	EC6609	Soft Computing	3-0-0 : 3	5	0	0	0	3	0	2	0	0	0	0	0
8	EC6275	Reconfigurable System Design Laboratory	0-0-3 : 2	15	4	11	0	0	0	0	0	0	0	0	0
9	EC6571	Data Communication Networks Laboratory	0-0-3 : 2	14	1	3	10	0	0	0	0	0	0	0	0
10	EC6575	Advanced Digital Communication Laboratory	0-0-3 : 2	17	1	11	3	1	0	0	0	0	1	0	0

Remarks (EC5) :

#	Subject Code	RollNo	Student Name	Given Grade	Revised Grade	Revised Grade Reason

EC6 : Signal and Image Processing

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
1	EC6403	Modern Radar Systems	3-0-0 : 3	7	0	1	2	4	0	0	0	0	0	0	0
2	EC6503	Statistical Signal Theory	3-0-0 : 3	22	1	2	12	2	1	0	0	0	4	0	0
3	EC6601	Advanced Digital Signal Processing	3-0-0 : 3	26	0	5	9	4	3	1	0	0	4	0	0
4	EC6603	Computer Vision	3-0-0 : 3	26	0	5	10	5	0	2	0	0	4	0	0
5	EC6607	Transform Domain Signal Processing and Applications	3-0-0 : 3	26	3	11	5	3	0	0	0	0	4	0	0
6	EC6609	Soft Computing	3-0-0 : 3	23	3	7	6	2	0	1	0	0	4	0	0
7	EC6473	Radar Signal Processing Laboratory	0-0-3 : 2	5	1	4	0	0	0	0	0	0	0	0	0
8	EC6671	Advanced Digital Signal Processing Laboratory	0-0-3 : 2	23	3	11	4	1	0	0	0	0	4	0	0
9	EC6673	Computer Vision Laboratory	0-0-3 : 2	24	1	10	7	2	0	0	0	0	4	0	0

Remarks (EC6) :

#	Subject Code	RollNo	Student Name	Given Grade	Revised Grade	Revised Grade Reason

EC7 : Microwave and Radar Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
1	EC6203	Reconfigurable System Design	3-0-0 : 3	9	0	2	3	4	0	0	0	0	0	0	0
2	EC6401	Microwave Devices and Circuits	3-0-0 : 3	12	1	3	8	0	0	0	0	0	0	0	0
3	EC6403	Modern Radar Systems	3-0-0 : 3	12	2	2	4	3	0	1	0	0	0	0	0
4	EC6405	Advanced Electromagnetic Theory	3-0-0 : 3	12	0	2	4	4	2	0	0	0	0	0	0
5	EC6505	Advanced Digital Communication	3-0-0 : 3	10	0	1	2	2	3	2	0	0	0	0	0
6	EC6601	Advanced Digital Signal Processing	3-0-0 : 3	5	0	1	1	2	1	0	0	0	0	0	0
7	EC6471	Microwave Circuits Design Laboratory	0-0-3 : 2	8	2	4	2	0	0	0	0	0	0	0	0
8	EC6473	Radar Signal Processing Laboratory	0-0-3 : 2	4	2	1	1	0	0	0	0	0	0	0	0
9	EC6575	Advanced Digital Communication Laboratory	0-0-3 : 2	9	0	2	6	1	0	0	0	0	0	0	0
10	EC6671	Advanced Digital Signal Processing Laboratory	0-0-3 : 2	3	0	3	0	0	0	0	0	0	0	0	0

Remarks (EC7) :

#	Subject Code	RollNo	Student Name	Given Grade	Revised Grade	Revised Grade Reason

EE1 : Electronic Systems and Communication

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
1	EE6101	Advanced Communication Techniques	3-0-0 : 3	22	0	9	4	5	1	1	0	0	2	0	0
2	EE6103	Advanced Signal Processing	3-0-0 : 3	22	0	3	2	11	2	2	0	0	2	0	0
3	EE6105	Microwave and Antenna Systems	3-0-0 : 3	22	0	0	6	9	3	2	0	0	2	0	0
4	EE6131	Digital Image Processing	3-0-0 : 3	21	0	2	6	6	3	2	0	0	2	0	0
5	EE6133	Mobile Radio Channels	3-0-0 : 3	16	4	6	3	1	0	0	0	0	2	0	0
6	EE6243	Soft Computing Techniques	3-0-0 : 3	7	0	3	3	1	0	0	0	0	0	0	0
7	EE6171	Electronic Devices and Systems Laboratory	0-0-3 : 2	22	2	5	8	4	1	0	0	0	2	0	0
8	EE6173	Signal and Image Processing Laboratory	0-0-3 : 2	22	0	2	6	11	1	0	0	0	2	0	0

Remarks (EE1) :

#	Subject Code	RollNo	Student Name	Given Grade	Revised Grade	Revised Grade Reason

EE3 : Control and Automation

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
1	EE6103	Advanced Signal Processing	3-0-0 : 3	24	0	0	5	6	6	4	0	0	3	0	0
2	EE6243	Soft Computing Techniques	3-0-0 : 3	24	0	2	3	5	7	4	0	0	3	0	0
3	EE6301	Linear System Theory	3-0-0 : 3	24	0	1	7	8	4	1	0	0	3	0	0
4	EE6303	Nonlinear Control	3-0-0 : 3	24	1	1	4	9	2	4	0	0	3	0	0
5	EE6305	Digital Control	3-0-0 : 3	24	0	8	10	2	1	0	0	0	3	0	0
6	EE6371	Control Systems Laboratory	0-0-3 : 2	24	1	6	9	4	0	1	0	0	3	0	0
7	EE6373	Control Systems Simulation Laboratory	0-0-3 : 2	24	0	2	3	10	6	0	0	0	3	0	0

Remarks (EE3) :

#	Subject Code	RollNo	Student Name	Given Grade	Revised Grade	Revised Grade Reason

EE4 : Power Electronics and Drives

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	EE6301	Linear System Theory	3-0-0 : 3	1	0	0	0	0	1	0	0	0	0	0	0
2	EE6401	Machine Analysis	3-0-0 : 3	24	2	3	7	5	2	2	0	0	3	0	0
3	EE6403	Power Electronic Converters and Machine Drives	3-0-0 : 3	24	0	3	11	6	1	0	0	0	3	0	0
4	EE6405	Control of Electric Drives	3-0-0 : 3	24	2	5	6	6	2	0	0	0	3	0	0
5	EE6441	Wind and Solar Energy Systems	3-0-0 : 3	23	0	2	2	11	4	1	0	0	3	0	0
6	EE6443	SWITCHED MODE POWER CONVERSION	3-0-0 : 3	24	1	6	7	3	4	0	0	0	3	0	0
7	EE6471	Power Electronics and Drives Laboratory-I	0-0-3 : 2	24	2	11	8	0	0	0	0	0	3	0	0
8	EE6473	Advanced Machines Laboratory	0-0-3 : 2	24	3	8	5	5	0	0	0	0	3	0	0

Remarks (EE4) :

#	Subject Code	RollNo	Student Name	Given Grade	Revised Grade	Revised Grade Reason

EE6 : Power Systems Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	EE6201	Power System Analysis and Control	3-0-0 : 3	24	3	3	2	2	5	5	0	0	4	0	0
2	EE6203	Power System Dynamics	3-0-0 : 3	24	0	6	10	5	0	1	0	0	2	0	0
3	EE6205	Extra High Voltage Transmission	3-0-0 : 3	24	0	5	11	4	1	1	0	0	2	0	0
4	EE6243	Soft Computing Techniques	3-0-0 : 3	24	2	4	2	3	1	8	0	0	4	0	0
5	EE6245	Silicon Solar Cell Technology	3-0-0 : 3	8	0	0	1	1	2	2	0	0	2	0	0
6	EE6441	Wind and Solar Energy Systems	3-0-0 : 3	16	0	2	3	8	1	1	0	0	1	0	0
7	EE6271	Power System Laboratory	0-0-3 : 2	24	0	16	6	0	0	0	0	0	2	0	0
8	EE6273	Computer Aided Power System Laboratory	0-0-3 : 2	24	3	4	5	5	1	4	0	0	2	0	0

Remarks (EE6) :

#	Subject Code	RollNo	Student Name	Given Grade	Revised Grade	Revised Grade Reason

ER1 : Atmosphere and Ocean Science

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	ER6011	Theoretical Meteorology	3-0-0 : 3	14	0	6	7	1	0	0	0	0	0	0	0
2	ER6013	Applied Atmospheric Dynamics	3-0-0 : 3	14	1	5	5	1	2	0	0	0	0	0	0
3	ER6015	Physical and dynamical Oceanography	3-0-0 : 3	14	2	10	2	0	0	0	0	0	0	0	0
4	ER6021	Introduction to Climate Science	3-0-0 : 3	14	1	1	7	5	0	0	0	0	0	0	0
5	ER6023	Introduction to Earth Science	3-0-0 : 3	14	0	7	3	3	1	0	0	0	0	0	0
6	ER6071	Instrumentation Laboratory	0-0-3 : 2	14	1	9	4	0	0	0	0	0	0	0	0
7	ER6073	Programming Laboratory	0-0-3 : 2	14	0	5	9	0	0	0	0	0	0	0	0

Remarks (ER1) :

#	Subject Code	RollNo	Student Name	Given Grade	Revised Grade	Revised Grade Reason

FP1 : Food Process Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	FP6101	Advanced Food Analysis and Quality Control	3-0-0 : 3	11	2	2	2	2	1	1	0	0	1	0	0
2	FP6203	Transfer Processes in Food Engineering	3-0-0 : 3	11	1	3	2	3	0	1	0	0	1	0	0
3	FP6205	Advanced Food Plant and Equipment Design	3-0-0 : 3	11	2	2	2	3	1	0	0	0	1	0	0
4	FP6235	Advanced Thermal Operation in Food Processing	3-0-0 : 3	11	0	4	5	1	0	0	0	0	1	0	0
5	FP6435	Advanced Bakery Technology	3-0-0 : 3	11	3	2	4	1	0	0	0	0	1	0	0
6	FP6171	Advanced Food Analysis and Quality Control Laboratory	0-0-3 : 2	11	2	5	2	1	0	0	0	0	1	0	0
7	FP6272	Advanced Food Engineering Laboratory	0-0-3 : 2	11	2	7	1	0	0	0	0	0	1	0	0

Remarks (FP1) :

#	Subject Code	RollNo	Student Name	Given Grade	Revised Grade	Revised Grade Reason

ID1 : Industrial Design

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	ID6101	Design Introduction	3-0-0 : 3	22	0	8	12	1	0	0	0	0	1	0	0
2	ID6103	Form Studies	3-0-0 : 3	22	5	11	4	1	0	0	0	0	1	0	0
3	ID6201	User Experience Design	3-0-0 : 3	22	1	8	12	0	0	0	0	0	1	0	0
4	ID6233	Computer Aided Geometric Design	3-0-0 : 3	22	1	9	10	1	0	0	0	0	1	0	0
5	ID6331	Advanced Product Design and Development	3-0-0 : 3	22	0	4	8	8	1	0	0	0	1	0	0
6	ID6171	Sketching and Rendering Laboratory	0-0-3 : 2	22	3	12	5	0	1	0	0	0	1	0	0
7	ID6173	Design Practice	0-0-3 : 2	22	3	13	5	0	0	0	0	0	1	0	0

Remarks (ID1) :

#	Subject Code	RollNo	Student Name	Given Grade	Revised Grade	Revised Grade Reason

ME1 : Machine Design and Analysis

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	ME6103	Analysis and Synthesis of Mechanisms	3-0-0 : 3	24	1	9	11	2	0	0	0	0	1	0	0
2	ME6105	Control System Engineering	3-0-0 : 3	24	2	12	8	1	0	0	0	0	1	0	0
3	ME6135	Applied Finite Element Analysis	3-0-0 : 3	24	3	9	8	2	1	0	0	0	1	0	0
4	ME6141	Experimental Stress Analysis	3-0-0 : 3	20	1	8	9	1	0	1	0	0	0	0	0
5	ME6143	Composite Materials	3-0-0 : 3	4	0	4	0	0	0	0	0	0	0	0	0
6	ME6201	Applied Elasticity and Plasticity	3-0-0 : 3	24	4	7	9	2	0	1	0	0	1	0	0
7	ME6073	Soft Computing Laboratory - I	0-0-3 : 2	24	4	16	3	0	0	0	0	0	1	0	0
8	ME6171	Tribology Laboratory	0-0-3 : 2	24	7	14	2	0	0	0	0	0	1	0	0

Remarks (ME1) :

#	Subject Code	RollNo	Student Name	Given Grade	Revised Grade	Revised Grade Reason

ME2 : Production Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	ME6135	Applied Finite Element Analysis	3-0-0 : 3	22	3	10	8	0	0	0	0	0	1	0	0
2	ME6201	Applied Elasticity and Plasticity	3-0-0 : 3	22	0	11	9	1	0	0	0	0	1	0	0
3	ME6203	Production Technology	3-0-0 : 3	22	0	14	6	1	0	0	0	0	1	0	0
4	ME6205	Metal Cutting and Tool Design	3-0-0 : 3	22	0	7	10	2	1	1	0	0	1	0	0
5	ME6237	Production Planning and Control	3-0-0 : 3	22	3	15	3	0	0	0	0	0	1	0	0
6	ME6271	System Simulation Laboratory	0-0-3 : 2	22	3	13	5	0	0	0	0	0	1	0	0
7	ME6279	Precession Engineering Laboratory	0-0-3 : 2	22	7	3	9	2	0	0	0	0	1	0	0

Remarks (ME2) :

#	Subject Code	RollNo	Student Name	Given Grade	Revised Grade	Revised Grade Reason

ME3 : Thermal Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	ME6301	Heat Transfer – I: Conduction and Radiation Heat Transfer	3-0-0 : 3	25	4	12	6	1	0	0	0	0	2	0	0
2	ME6303	Advanced Fluid Mechanics	3-0-0 : 3	25	3	7	7	6	0	0	0	0	2	0	0
3	ME6305	Advanced Thermodynamics	3-0-0 : 3	25	4	9	7	3	0	0	0	0	2	0	0
4	ME6335	Thermodynamics of Cryogenic System	3-0-0 : 3	16	1	5	6	2	2	0	0	0	0	0	0
5	ME6337	Experimental Methods in Thermal Engineering	3-0-0 : 3	25	2	14	5	2	0	0	0	0	2	0	0
6	ME6538	Advanced IC Engine Technology	3-0-0 : 3	9	3	4	0	0	0	0	0	0	2	0	0
7	ME6371	Computational Fluid Flow Laboratory	0-0-3 : 2	25	2	7	7	6	1	0	0	0	2	0	0
8	ME6375	Refrigeration and Cryogenic Laboratory	0-0-3 : 2	25	13	10	0	1	0	1	0	0	0	0	0

Remarks (ME3) :

#	Subject Code	RollNo	Student Name	Given Grade	Revised Grade	Revised Grade Reason

#	Subject Code	RollNo	Student Name		Grade	Grade	Revised Grade Reason
1	ME6335	221ME3121	RANGASWAMY PERUMALLA	B		C	Alternative Mid Semester

ME5 : Cryogenic and Vacuum Technology

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
1	ME6301	Heat Transfer – I: Conduction and Radiation Heat Transfer	3-0-0 : 3	16	1	8	3	1	0	0	0	0	3	0	0
2	ME6303	Advanced Fluid Mechanics	3-0-0 : 3	5	0	1	3	0	0	0	0	0	1	0	0
3	ME6335	Thermodynamics of Cryogenic System	3-0-0 : 3	16	0	4	5	3	1	0	0	0	3	0	0
4	ME6341	Refrigeration and Cryogenic Systems	3-0-0 : 3	11	3	3	2	1	0	0	0	0	2	0	0
5	ME6535	Vacuum Technology	3-0-0 : 3	16	1	2	3	5	2	0	0	0	3	0	0
6	PH6466	Low Temperature Properties of Matter	3-0-0 : 3	16	0	1	5	4	3	0	0	0	3	0	0
7	ME6371	Computational Fluid Flow Laboratory	0-0-3 : 2	16	3	4	2	4	0	0	0	0	3	0	0
8	ME6375	Refrigeration and Cryogenic Laboratory	0-0-3 : 2	16	7	7	1	0	0	1	0	0	0	0	0

Remarks (ME5) :

#	Subject Code	RollNo	Student Name	Given Grade	Revised Grade	Revised Grade Reason

MM1 : Metallurgical and Materials Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
1	MM6211	Mechanical Behaviour of Materials	3-0-0 : 3	10	0	2	1	2	1	0	0	0	4	0	0
2	MM6311	Metallurgical Thermodynamics and Kinetics	3-0-0 : 3	10	0	2	2	1	1	0	0	0	4	0	0
3	MM6521	Powder Technology	3-0-0 : 3	10	0	3	3	0	0	0	0	0	4	0	0
4	MM6523	Experimental Techniques in Materials Engineering	3-0-0 : 3	10	1	1	1	3	0	0	0	0	4	0	0
5	MM6529	Surface Engineering	3-0-0 : 3	10	2	1	0	1	2	0	0	0	4	0	0
6	MM6371	Metallurgical Thermodynamics and Kinetics Laboratory	0-0-3 : 2	10	0	4	2	0	0	0	0	0	4	0	0
7	MM6572	Experimental Techniques in Materials Engineering Laboratory	0-0-3 : 2	10	2	4	0	0	0	0	0	0	4	0	0

Remarks (MM1) :

#	Subject Code	RollNo	Student Name	Given Grade	Revised Grade	Revised Grade Reason

MN1 : Mining Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
1	MN6035	Mine Systems Engineering	3-0-0 : 3	6	0	0	0	2	1	1	0	0	2	0	0
2	MN6101	Rock Excavation Enggineering	3-0-0 : 3	6	0	1	1	3	0	0	0	0	1	0	0
3	MN6162	Advanced Coal Mining	3-0-0 : 3	6	0	2	1	2	0	0	0	0	1	0	0
4	MN6201	Environmental Control and Management	3-0-0 : 3	6	0	2	1	0	2	0	0	0	1	0	0
5	MN6261	Safety Risk Assessment and Management	3-0-0 : 3	6	0	1	1	1	2	0	0	0	1	0	0
6	MN6171	Geotechnical Laboratory	0-0-3 : 2	6	0	2	3	0	0	0	0	0	1	0	0
7	MN6271	Environmental Enggineering Laboratory	0-0-3 : 2	6	2	1	2	0	0	0	0	0	1	0	0

Remarks (MN1) :

#	Subject Code	RollNo	Student Name	Given Grade	Revised Grade	Revised Grade Reason

राष्ट्रीय प्रौद्योगिकी संस्थान राउरकेला

NATIONAL INSTITUTE OF TECHNOLOGY ROURKELA

GRADE STATISTICS REPORT (M.TECH. : 2021-22 - AUTUMN : 3RD SEMESTER)   24-Dec-2021

BM1 : Biomedical Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	BM6993	Research Project - I	0-0-0 : 20	12	0	3	7	1	1	0	0	0	0	0	0
2	BM6991	Summer Research/Industrial Project	0-0-0 : 4	12	0	6	3	1	2	0	0	0	0	0	0

BM2 : Biotechnology

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	BM6993	Research Project - I	0-0-0 : 20	18	0	13	5	0	0	0	0	0	0	0	0
2	BM6991	Summer Research/Industrial Project	0-0-0 : 4	18	0	11	3	2	2	0	0	0	0	0	0

CE1 : Geotechnical Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	CE6993	Research Project - I	0-0-0 : 20	24	1	12	9	0	2	0	0	0	0	0	0
2	CE6991	Summer Research/Industrial Project	0-0-0 : 4	24	3	9	10	2	0	0	0	0	0	0	0

CE2 : Structural Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	CE6993	Research Project - I	0-0-0 : 20	27	3	10	9	3	0	0	0	0	2	0	0
2	CE6991	Summer Research/Industrial Project	0-0-0 : 4	27	3	10	9	3	0	0	0	0	2	0	0

CE3 : Transportation Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	CE6993	Research Project - I	0-0-0 : 20	17	0	6	7	1	2	1	0	0	0	0	0
2	CE6991	Summer Research/Industrial Project	0-0-0 : 4	17	2	8	5	2	0	0	0	0	0	0	0

CE4 : Water Resources Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	CE6993	Research Project - I	0-0-0 : 20	25	4	11	10	0	0	0	0	0	0	0	0
2	CE6991	Summer Research/Industrial Project	0-0-0 : 4	25	3	9	10	3	0	0	0	0	0	0	0

CH1 : Chemical Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	CH6993	Research Project - I	0-0-0 : 20	8	0	4	4	0	0	0	0	0	0	0	0
2	CH6991	Summer Research/Industrial Project	0-0-0 : 4	8	0	0	6	0	1	1	0	0	0	0	0

CH3 : Energy and Environmental Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	CH6993	Research Project - I	0-0-0 : 20	18	0	10	3	5	0	0	0	0	0	0	0
2	CH6991	Summer Research/Industrial Project	0-0-0 : 4	18	0	2	11	5	0	0	0	0	0	0	0

CR2 : Industrial Ceramics

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	CR6993	Research Project - I	0-0-0 : 20	15	0	7	6	1	0	1	0	0	0	0	0
2	CR6991	Summer Research/Industrial Project	0-0-0 : 4	15	7	6	1	1	0	0	0	0	0	0	0

CS1 : Computer Science

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	CS6993	Research Project - I	0-0-0 : 20	24	0	1	13	7	3	0	0	0	0	0	0
2	CS6991	Summer Research/Industrial Project	0-0-0 : 4	24	0	5	10	7	2	0	0	0	0	0	0

CS2 : Information Security

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	CS6993	Research Project - I	0-0-0 : 20	20	0	9	7	3	1	0	0	0	0	0	0
2	CS6991	Summer Research/Industrial Project	0-0-0 : 4	20	1	9	8	0	2	0	0	0	0	0	0

CS3 : Software Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	CS6993	Research Project - I	0-0-0 : 20	15	0	6	5	3	0	0	0	0	1	0	0
2	CS6991	Summer Research/Industrial Project	0-0-0 : 4	15	0	6	5	2	1	0	0	0	1	0	0

EC2 : VLSI Design and Embedded Systems

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	EC6993	Research Project - I	0-0-0 : 20	20	0	6	10	2	0	0	0	0	2	0	0
2	EC6991	Summer Research/Industrial Project	0-0-0 : 4	20	0	0	5	9	4	1	0	0	1	0	0

EC3 : Electronics and Instrumentation Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	EC6993	Research Project - I	0-0-0 : 20	17	0	3	7	4	2	0	0	0	1	0	0
2	EC6991	Summer Research/Industrial Project	0-0-0 : 4	17	0	0	4	10	1	2	0	0	0	0	0

EC5 : Communication and Networks

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	EC6993	Research Project - I	0-0-0 : 20	22	2	8	8	3	0	0	0	0	1	0	0
2	EC6991	Summer Research/Industrial Project	0-0-0 : 4	22	1	7	7	6	0	0	0	0	1	0	0

EC6 : Signal and Image Processing

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	EC6993	Research Project - I	0-0-0 : 20	17	0	7	8	2	0	0	0	0	0	0	0
2	EC6991	Summer Research/Industrial Project	0-0-0 : 4	17	0	5	10	1	1	0	0	0	0	0	0

EC7 : Microwave and Radar Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	EC6993	Research Project - I	0-0-0 : 20	5	1	1	2	1	0	0	0	0	0	0	0
2	EC6991	Summer Research/Industrial Project	0-0-0 : 4	5	1	3	0	1	0	0	0	0	0	0	0

EE1 : Electronic Systems and Communication

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	EE6993	Research Project - I	0-0-0 : 20	18	0	4	8	1	1	2	0	0	2	0	0
2	EE6991	Summer Research/Industrial Project	0-0-0 : 4	18	1	8	4	1	2	0	0	0	2	0	0

EE3 : Control and Automation

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	EE6993	Research Project - I	0-0-0 : 20	11	2	4	2	1	2	0	0	0	0	0	0
2	EE6991	Summer Research/Industrial Project	0-0-0 : 4	11	2	4	2	1	2	0	0	0	0	0	0

EE4 : Power Electronics and Drives

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
1	EE6993	Research Project - I	0-0-0 : 20	21	2	8	8	2	1	0	0	0	0	0	0
2	EE6991	Summer Research/Industrial Project	0-0-0 : 4	21	2	8	8	2	1	0	0	0	0	0	0

EE6 : Power Systems Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
1	EE6993	Research Project - I	0-0-0 : 20	24	1	13	4	1	3	0	0	0	2	0	0
2	EE6991	Summer Research/Industrial Project	0-0-0 : 4	23	0	14	8	0	0	0	0	0	1	0	0

ER1 : Atmosphere and Ocean Science

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
1	ER6993	Research Project - I	0-0-0 : 20	17	1	2	14	0	0	0	0	0	0	0	0
2	ER6991	Summer Research/Industrial Project	0-0-0 : 4	17	0	10	7	0	0	0	0	0	0	0	0

FP1 : Food Process Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
1	FP6993	Research Project - I	0-0-0 : 20	9	0	7	1	1	0	0	0	0	0	0	0
2	FP6991	Summer Research/Industrial Project	0-0-0 : 4	9	2	7	0	0	0	0	0	0	0	0	0

ID1 : Industrial Design

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
1	ID6993	Research Project - I	0-0-0 : 20	17	2	7	3	3	2	0	0	0	0	0	0
2	ID6991	Summer Research/Industrial Project	0-0-0 : 4	17	4	9	3	1	0	0	0	0	0	0	0

ME1 : Machine Design and Analysis

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
1	ME6993	Research Project - I	0-0-0 : 20	20	3	14	3	0	0	0	0	0	0	0	0
2	ME6991	Summer Research/Industrial Project	0-0-0 : 4	20	6	14	0	0	0	0	0	0	0	0	0

ME2 : Production Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
1	ME6993	Research Project - I	0-0-0 : 20	23	6	13	4	0	0	0	0	0	0	0	0
2	ME6991	Summer Research/Industrial Project	0-0-0 : 4	23	0	23	0	0	0	0	0	0	0	0	0

ME3 : Thermal Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
1	ME6993	Research Project - I	0-0-0 : 20	19	4	11	3	0	1	0	0	0	0	0	0
2	ME6991	Summer Research/Industrial Project	0-0-0 : 4	19	0	10	8	0	0	0	0	0	1	0	0

ME5 : Cryogenic and Vacuum Technology

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
1	ME6993	Research Project - I	0-0-0 : 20	22	5	10	7	0	0	0	0	0	0	0	0
2	ME6991	Summer Research/Industrial Project	0-0-0 : 4	22	1	11	9	0	0	0	0	0	1	0	0

MM1 : Metallurgical and Materials Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
1	MM6993	Research Project - I	0-0-0 : 20	20	0	10	10	0	0	0	0	0	0	0	0
2	MM6991	Summer Research/Industrial Project	0-0-0 : 4	20	0	8	10	2	0	0	0	0	0	0	0

MN1 : Mining Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	MN6993	Research Project - I	0-0-0 : 20	21	0	7	12	0	0	0	0	0	2	0	0
2	MN6991	Summer Research/Industrial Project	0-0-0 : 4	20	0	11	7	1	0	0	0	0	1	0	0

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GRADE STATISTICS REPORT (M.SC. : 2021-22 - AUTUMN : 1ST SEMESTER)   24-Dec-2021

AG2 : Applied Geology

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	ER5001	Geochemistry	3-0-0 : 3	37	3	16	15	2	0	1	0	0	0	0	0
2	ER5101	Mineral Sciences	3-0-0 : 3	37	11	13	8	2	2	0	0	0	1	0	0
3	ER5201	Earth System Science	3-0-0 : 3	37	0	4	15	13	4	1	0	0	0	0	0
4	ER5301	Structural Geology	3-0-0 : 3	37	0	8	25	3	0	1	0	0	0	0	0
5	ER5071	Geochemistry Laboratory	0-0-3 : 2	37	3	17	16	0	0	0	0	0	1	0	0
6	ER5171	Mineralogy Laboratory	0-0-3 : 2	37	14	13	7	2	0	0	0	0	1	0	0
7	ER5371	Structural Geology Laboratory	0-0-3 : 2	37	2	23	7	2	2	0	0	0	1	0	0

AS2 : Atmospheric Sciences

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	ER5401	Physics of Atmosphere	3-0-0 : 3	18	2	10	4	1	1	0	0	0	0	0	0
2	ER5403	Dynamics of Atmosphere	3-0-0 : 3	18	3	9	2	3	1	0	0	0	0	0	0
3	ER5405	Physics of Ocean	3-0-0 : 3	18	2	10	5	1	0	0	0	0	0	0	0
4	ER5407	Science of Climate and Climate Change	3-0-0 : 3	18	0	6	9	3	0	0	0	0	0	0	0
5	ER5471	Atmospheric Instrumentation Laboratory	0-0-3 : 2	18	4	10	4	0	0	0	0	0	0	0	0
6	ER5571	Basic Programming Laboratory	0-0-3 : 2	18	3	9	6	0	0	0	0	0	0	0	0
7	ER5671	MATLAB Programming Laboratory	0-0-3 : 2	18	3	9	6	0	0	0	0	0	0	0	0

CY2 : Chemistry

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I

#	Code		L-T-P : Credit	Enrolled	EX	A	B	C	D	P	S	U	F	X	I
1	CY4101	Stereochemistry and Reaction Mechanism	3-1-0 : 4	38	3	5	12	13	2	3	0	0	0	0	0
2	CY4201	Main Group and Organometallic Chemistry	3-1-0 : 4	38	0	2	22	9	5	0	0	0	0	0	0
3	CY4301	Quantum Chemistry	3-1-0 : 4	38	0	8	16	13	1	0	0	0	0	0	0
4	CY4303	Chemical Applications of Group Theory	3-0-0 : 3	38	1	13	15	6	3	0	0	0	0	0	0
5	CY4701	Organic Compounds Preparations Laboratory	0-0-3 : 2	38	9	21	8	0	0	0	0	0	0	0	0
6	CY4703	Physical Chemistry Laboratory	0-0-3 : 2	38	6	17	13	1	1	0	0	0	0	0	0
7	CY4705	Materials Synthesis Laboratory	0-0-3 : 2	38	11	17	4	6	0	0	0	0	0	0	0

LS2 : Life Science

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	LS4103	Biochemistry	3-0-0 : 3	35	1	6	12	3	0	0	0	0	13	0	0
2	LS4301	Bioanalytical Techniques	3-0-0 : 3	35	0	1	4	11	5	1	0	0	13	0	0
3	LS4407	Cell Biology	3-0-0 : 3	35	0	6	7	3	5	1	0	0	13	0	0
4	LS4602	Microbiology	3-0-0 : 3	35	0	3	5	11	3	0	0	0	13	0	0
5	LS4391	Bioanalytical Techniques Laboratory	0-0-3 : 2	35	0	14	8	0	0	0	0	0	13	0	0
6	LS4491	Cell Biology Laboratory	0-0-3 : 2	35	4	7	11	0	0	0	0	0	13	0	0
7	LS4691	Microbiology Laboratory	0-0-3 : 2	35	4	7	7	1	3	0	0	0	13	0	0

MA2 : Mathematics

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	MA4101	Real Analysis: Series of Functions and Calculus of Several Variables	3-1-0 : 4	37	0	1	11	14	7	0	0	0	4	0	0
2	MA4103	Complex Analysis - II	3-1-0 : 4	37	1	7	15	9	1	0	0	0	4	0	0
3	MA4107	Linear Algebra	3-1-0 : 4	37	0	0	22	9	2	0	0	0	4	0	0
4	MA4305	Numerical Analysis - II	3-1-0 : 4	37	0	0	9	19	5	0	0	0	4	0	0
5	MA4373	Numerical Methods Laboratory	1-2-2 : 2	37	0	7	20	7	0	0	0	0	3	0	0

PH2 : Physics

#	Subject	Subject Name	L-T-P : Credit	No.	Grade Distribution

	Code			Enrolled	EX	A	B	C	D	P	S	U	F	X	I
1	PH4001	Mathematical Methods in Physics	3-1-0 : 4	39	2	13	9	8	1	0	0	0	6	0	0
2	PH4002	Electrodynamics	3-1-0 : 4	39	1	5	8	6	2	10	0	0	7	0	0
3	PH4003	Classical Mechanics	3-1-0 : 4	39	0	9	8	10	5	1	0	0	6	0	0
4	PH4005	Quantum Mechanics - I	3-1-0 : 4	39	0	0	1	9	11	8	0	0	10	0	0
5	HS5171	Advanced Language Laboratory	0-0-3 : 2	39	0	14	18	7	0	0	0	0	0	0	0
6	PH4071	Modern Physics Laboratory	0-0-3 : 2	39	1	25	3	2	0	0	0	0	8	0	0

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AG2 : Applied Geology

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	ER5993	Research Project - I	0-0-0 : 6	32	9	8	14	1	0	0	0	0	0	0	0
2	ER5103	Sedimentary Petrology	3-1-0 : 4	32	0	5	25	1	1	0	0	0	0	0	0
3	ER5003	Hydrogeology	3-0-0 : 3	32	3	18	8	3	0	0	0	0	0	0	0
4	ER5041	Isotope Geology	3-0-0 : 3	32	5	17	8	2	0	0	0	0	0	0	0
5	ER5073	Hydrogeology Laboratory	0-0-3 : 2	32	6	10	16	0	0	0	0	0	0	0	0
6	ER5881	Seminar and Technical Writing	0-0-3 : 2	32	0	20	12	0	0	0	0	0	0	0	0

AS2 : Atmospheric Sciences

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	ER5993	Research Project - I	0-0-0 : 6	9	2	5	1	0	0	0	0	0	1	0	0
2	ER5411	Tropical Meteorology	3-0-0 : 3	9	0	3	3	1	1	0	0	0	1	0	0
3	ER5601	Numerical Weather Prediction	3-0-0 : 3	9	1	3	3	0	1	0	0	0	1	0	0
4	ER5603	Parameterization of Physical Process	3-0-0 : 3	9	2	4	1	1	0	0	0	0	1	0	0
5	ER5473	Simulation Lab-1	0-0-3 : 2	9	3	4	1	0	0	0	0	0	1	0	0
6	ER5881	Seminar and Technical Writing	0-0-3 : 2	9	0	3	5	0	0	0	0	0	1	0	0

CY2 : Chemistry

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	CY5993	Research Project - I	0-0-0 : 6	31	0	28	3	0	0	0	0	0	0	0	0
2	CY5101	Methods in Organic Synthesis	3-1-0 : 4	31	1	6	24	0	0	0	0	0	0	0	0
3	CY5201	Bioinorganic Chemistry	3-1-0 : 4	31	4	11	15	1	0	0	0	0	0	0	0
4	CY5103	Heterocycles and Natural Products	3-0-0 : 3	7	1	4	1	1	0	0	0	0	0	0	0
5	CY5205	Solid State Chemistry	3-0-0 : 3	19	0	2	10	6	1	0	0	0	0	0	0
6	CY5301	Statistical Thermodynamics	3-0-0 : 3	5	0	0	2	2	1	0	0	0	0	0	0
7	CY5701	Environmental Chemistry	0-0-3 : 2	31	3	14	14	0	0	0	0	0	0	0	0
8	CY5881	Seminar and Technical Writing	0-0-3 : 2	31	0	18	13	0	0	0	0	0	0	0	0

LS2 : Life Science

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	LS5993	Research Project - I	0-0-0 : 6	27	0	5	12	9	1	0	0	0	0	0	0
2	LS5410	Molecular Genetics	3-0-0 : 3	27	1	8	8	8	2	0	0	0	0	0	0
3	LS5502	Immunotechniques	3-0-0 : 3	27	2	4	5	9	4	3	0	0	0	0	0
4	LS5604	Ecology and Environmental Sciences	3-0-0 : 3	27	1	5	17	3	1	0	0	0	0	0	0
5	LS5591	Immunology Laboratory	0-0-3 : 2	27	1	16	4	6	0	0	0	0	0	0	0
6	LS5881	Seminar and Technical Writing	0-0-3 : 2	27	4	9	11	3	0	0	0	0	0	0	0

MA2 : Mathematics

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	MA5993	Research Project - I	0-0-0 : 6	28	0	4	21	3	0	0	0	0	0	0	0
2	MA5101	Functional Analysis	3-0-0 : 3	28	0	3	10	11	3	1	0	0	0	0	0
3	MA5118	Lie Algebra	3-0-0 : 3	28	0	5	15	8	0	0	0	0	0	0	0
4	MA5303	Partial Differential Equations	3-0-0 : 3	28	0	1	0	4	10	13	0	0	0	0	0
5	MA5332	Fluid Dynamics	3-0-0 : 3	28	0	5	23	0	0	0	0	0	0	0	0
6	MA5881	Seminar and Technical Writing	0-0-3 : 2	28	0	9	18	1	0	0	0	0	0	0	0

PH2 : Physics

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	PH5993	Research Project - I	0-0-0 : 6	25	0	9	9	7	0	0	0	0	0	0	0

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
2	PH5001	Nuclear and Particle Physics	3-1-0 : 4	25	0	2	3	5	7	8	0	0	0	0	0
3	PH4074	Computational Physics Laboratory	1-0-3 : 3	25	2	6	3	6	4	4	0	0	0	0	0
4	PH5006	Analog and Digital Electronics	3-0-0 : 3	25	1	5	10	7	2	0	0	0	0	0	0
5	PH6111	Advanced Quantum Mechanics	3-0-0 : 3	10	0	2	0	2	3	3	0	0	0	0	0
6	PH6114	Non – Linear Dynamics, Chaos and Its Recent Applications	3-0-0 : 3	1	0	0	1	0	0	0	0	0	0	0	0
7	PH6117	Introduction To Astrophysics	3-0-0 : 3	25	3	5	6	7	4	0	0	0	0	0	0
8	PH6234	Laser Physics	3-0-0 : 3	9	1	3	1	3	1	0	0	0	0	0	0
9	PH6466	Low Temperature Properties of Matter	3-0-0 : 3	5	0	0	1	3	1	0	0	0	0	0	0
10	PH5881	Seminar and Technical Writing	0-0-3 : 2	25	0	3	10	9	2	0	0	0	1	0	0

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GRADE STATISTICS REPORT (MBA : 2021-22 - AUTUMN : 1ST SEMESTER)   24-Dec-2021

SM1 : School of Management

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
1	SM6101	Financial and Cost Accounting	3-0-0 : 3	40	0	9	22	6	2	0	0	0	1	0	0
2	SM6201	Marketing Management	3-0-0 : 3	40	0	30	8	1	0	0	0	0	1	0	0
3	SM6301	Organizational Behavior and Structure	3-0-0 : 3	40	0	6	30	3	0	0	0	0	1	0	0
4	SM6501	Management Information Systems	3-0-0 : 3	40	0	7	26	6	0	0	0	0	1	0	0
5	SM6601	Managerial Economics	3-0-0 : 3	40	0	15	24	0	0	1	0	0	0	0	0
6	SM6611	Business Research Methodology	3-0-0 : 3	40	0	4	17	16	2	0	0	0	1	0	0
7	SM6171	Business Simulation Laboratory	0-0-2 : 2	40	0	13	19	7	1	0	0	0	0	0	0
8	SM6371	IGBO Laboratory	2-0-0 : 2	40	3	11	25	0	0	0	0	0	1	0	0
9	SM6571	Basic Computer Laboratory	0-0-2 : 2	40	0	4	29	5	1	0	0	0	1	0	0
10	SM6881	Seminar and Technical Writing - I	0-0-3 : 2	40	5	26	8	0	0	0	0	0	1	0	0

Remarks (SM1) :

#	Subject Code	RollNo	Student Name	Given Grade	Revised Grade	Revised Grade Reason
1	SM6101	321SM1014	SUBHAM DEY	C	D	Alternative Mid Semester
2	SM6501	321SM1014	SUBHAM DEY	B	C	Alternative Mid Semester

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GRADE STATISTICS REPORT (MBA : 2021-22 - AUTUMN : 3RD SEMESTER)   24-Dec-2021

SM1 : School of Management

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	SM6111	Financial Institutions, Instruments and Markets	3-0-0 : 3	15	0	0	1	7	5	2	0	0	0	0	0
2	SM6121	Financial Derivatives	3-0-0 : 3	12	0	5	5	2	0	0	0	0	0	0	0
3	SM6131	Commercial Banking	3-0-0 : 3	12	0	0	1	1	6	4	0	0	0	0	0
4	SM6151	Security Analysis and Portfolio Management	3-0-0 : 3	15	0	7	8	0	0	0	0	0	0	0	0
5	SM6211	Consumer Behaviour and Marketing Research	3-0-0 : 3	14	0	3	10	1	0	0	0	0	0	0	0
6	SM6221	Strategic Brand Management	3-0-0 : 3	14	1	6	6	1	0	0	0	0	0	0	0
7	SM6231	Retail Management	3-0-0 : 3	5	0	1	2	2	0	0	0	0	0	0	0
8	SM6241	Industrial Marketing	3-0-0 : 3	5	0	1	3	1	0	0	0	0	0	0	0
9	SM6311	Employee Relations and Labour Legislations	3-0-0 : 3	9	0	3	5	1	0	0	0	0	0	0	0
10	SM6331	Training and Development	3-0-0 : 3	12	0	2	6	4	0	0	0	0	0	0	0
11	SM6351	Employee Compensation and Benefits Managemen	3-0-0 : 3	9	0	4	2	2	1	0	0	0	0	0	0
12	SM6361	Talent Management	3-0-0 : 3	12	0	3	9	0	0	0	0	0	0	0	0
13	SM6421	Logistics and Supply Chain Management	3-0-0 : 3	11	0	5	4	2	0	0	0	0	0	0	0
14	SM6422	Total Quality Management and Six Sigma	3-0-0 : 3	11	1	2	8	0	0	0	0	0	0	0	0
15	SM6991	Summer Internship and Research Experience	0-0-0 : 3	26	0	5	14	7	0	0	0	0	0	0	0
16	SM6271	Leadership Laboratory	0-0-2 : 2	26	0	7	13	6	0	0	0	0	0	0	0
17	SM6471	OR Laboratory	0-0-2 : 2	26	2	8	12	4	0	0	0	0	0	0	0
18	SM6671	Language Laboratory	0-0-2 : 2	26	0	14	11	1	0	0	0	0	0	0	0
19	SM6883	Seminar and Technical Writing - III	0-0-3 : 2	26	0	13	12	1	0	0	0	0	0	0	0

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GRADE STATISTICS REPORT (MA : 2021-22 - AUTUMN : 1ST SEMESTER)   24-Dec-2021

HS1 : Development Studies

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	HS5001	Research Methodology in Social Sciences	3-0-0 : 3	28	0	10	11	1	0	0	0	0	6	0	0
2	HS5132	Science of Self Realization for Holistic Humane Development	3-0-0 : 3	4	0	0	1	0	0	1	0	0	2	0	0
3	HS5201	Psychological Perspective On Development	3-0-0 : 3	28	4	14	4	0	0	0	0	0	6	0	0
4	HS5301	Social Institutions and Development	3-0-0 : 3	28	0	4	14	2	2	0	0	0	6	0	0
5	HS5401	Economics for Development Studies	3-0-0 : 3	28	0	1	13	6	2	0	0	0	6	0	0
6	HS5444	Public Economics	3-0-0 : 3	17	0	3	7	1	0	2	0	0	4	0	0
7	SM6611	Business Research Methodology	3-0-0 : 3	7	0	1	3	2	1	0	0	0	0	0	0
8	HS5171	Advanced Language Laboratory	0-0-3 : 2	28	0	20	5	3	0	0	0	0	0	0	0
9	HS5471	Statistical Laboratory - I	0-0-3 : 2	28	2	13	7	5	0	0	0	0	1	0	0

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GRADE STATISTICS REPORT (MA : 2021-22 - AUTUMN : 3RD SEMESTER)   24-Dec-2021

HS1 : Development Studies

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	HS5993	Research Project - I	0-0-0 : 4	25	0	15	8	1	0	0	0	0	1	0	0
2	HS5132	Science of Self Realization for Holistic Humane Development	3-0-0 : 3	7	1	2	2	2	0	0	0	0	0	0	0
3	HS5313	Gender and Development	3-0-0 : 3	25	0	19	5	0	0	0	0	0	1	0	0
4	HS5323	Rural Development	3-0-0 : 3	25	1	6	10	5	2	0	0	0	1	0	0
5	HS5413	Financial System and Development	3-0-0 : 3	25	0	5	13	5	1	0	0	0	1	0	0
6	HS5423	Contemporary Policy Issues in Development	3-0-0 : 3	25	0	4	7	6	6	1	0	0	1	0	0
7	HS5444	Public Economics	3-0-0 : 3	1	0	0	1	0	0	0	0	0	0	0	0
8	SM6611	Business Research Methodology	3-0-0 : 3	17	0	2	1	6	5	2	0	0	1	0	0
9	HS5881	Seminar and Technical Writing - I	0-0-3 : 2	25	0	17	7	0	0	0	0	0	1	0	0

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GRADE STATISTICS REPORT (M.TECH.(RES) : 2021-22 - AUTUMN : 1ST SEMESTER)   24-Dec-2021

CE : Civil Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	CE6105	Soil Exploration and Analysis of Foundations	3-0-0 : 3	1	0	1	0	0	0	0	0	0	0	0	0
2	HS7100	English for Research Writing	3-0-0 : 3	1	0	1	0	0	0	0	0	0	0	0	0
3	CE6171	Geotechnical Engineering Laboratory	0-0-3 : 2	1	0	1	0	0	0	0	0	0	0	0	0
4	CE7998	Seminar and Technical Writing	0-0-3 : 2	1	0	0	0	1	0	0	0	0	0	0	0

CH : Chemical Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	CH799	Research Project	0-0-0 : 24	1	0	1	0	0	0	0	0	0	0	0	0
2	CH798	Seminar and Technical Writing	0-0-3 : 2	1	0	1	0	0	0	0	0	0	0	0	0

CS : Computer Science and Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	CS799	Research Project	0-0-0 : 24	3	0	2	1	0	0	0	0	0	0	0	0
2	CS7999	Research Project	0-0-0 : 24	0	0	0	0	0	0	0	0	0	0	0	0
3	CS6103	Data Structure and Algorithm Design	3-0-0 : 3	1	0	0	0	0	0	0	0	0	1	0	0
4	CS798	Seminar and Technical Writing	0-0-3 : 2	2	0	2	0	0	0	0	0	0	0	0	0
5	CS7998	Seminar and Technical Writing	0-0-3 : 2	1	0	0	0	0	0	0	0	0	1	0	0

EE : Electrical Engineering

#	Subject	Subject Name	L-T-P : Credit	No.	Grade Distribution

#	Code		L-T-P : Credit	Enrolled	EX	A	B	C	D	P	S	U	F	X	I
1	EE799	Research Project	0-0-0 : 24	1	0	1	0	0	0	0	0	0	0	0	0
2	EE798	Seminar and Technical Writing	0-0-3 : 2	1	0	1	0	0	0	0	0	0	0	0	0

AR : Planning and Architecture

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	PA799	Research Project	0-0-0 : 24	4	1	1	1	0	0	0	0	0	1	0	0
2	PA7999	Research Project	0-0-0 : 24	0	0	0	0	0	0	0	0	0	0	0	0
3	HS5001	Research Methodology in Social Sciences	3-0-0 : 3	1	0	0	0	0	0	0	0	0	1	0	0
4	ID6201	User Experience Design	3-0-0 : 3	1	0	1	0	0	0	0	0	0	0	0	0
5	PA798	Seminar and Technical Writing	0-0-3 : 2	2	0	1	0	0	0	0	0	0	1	0	0
6	PA7998	Seminar and Technical Writing	0-0-3 : 2	1	0	1	0	0	0	0	0	0	0	0	0

BM : Biotechnology and Medical Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	BM799	Research Project	0-0-0 : 24	41	5	30	3	3	0	0	0	0	0	0	0
2	BM7999	Research Project	0-0-0 : 24	0	0	0	0	0	0	0	0	0	0	0	0
3	BM6031	Anatomy and Physiology	3-0-0 : 3	12	5	3	4	0	0	0	0	0	0	0	0
4	BM6133	Nanotechnology in Medical Applications	3-0-0 : 3	4	0	1	2	1	0	0	0	0	0	0	0
5	BM6231	Computational Methods in Biomedical Engineering	3-0-0 : 3	5	0	2	3	0	0	0	0	0	0	0	0
6	BM6301	Biomedical Signal Processing	3-0-0 : 3	7	0	3	3	0	0	1	0	0	0	0	0
7	BM6303	Biomedical Instrumentation	3-0-0 : 3	7	1	3	1	1	0	1	0	0	0	0	0
8	BM6401	Advanced Recombinant DNA Technology	3-0-0 : 3	8	0	4	1	3	0	0	0	0	0	0	0
9	BM6501	Bioprocess Engineering	3-0-0 : 3	4	0	0	3	1	0	0	0	0	0	0	0
10	BM6631	Industrial Biotechnology	3-0-0 : 3	11	0	2	8	0	1	0	0	0	0	0	0
11	BM6633	Advanced Environmental Biotechnology	3-0-0 : 3	5	0	1	4	0	0	0	0	0	0	0	0
12	CH6233	Principles of Analytical and Characterization Instruments	3-0-0 : 3	1	0	0	0	1	0	0	0	0	0	0	0

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#	Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
13	HS7100	English for Research Writing	3-0-0 : 3	21	1	11	8	1	0	0	0	0	0	0	0
14	LS6004	Cell Signalling	3-0-0 : 3	1	1	0	0	0	0	0	0	0	0	0	0
15	BM798	Seminar and Technical Writing	0-0-3 : 2	23	0	21	2	0	0	0	0	0	0	0	0
16	BM7998	Seminar and Technical Writing	0-0-3 : 2	28	0	21	7	0	0	0	0	0	0	0	0

CE : Civil Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	CE799	Research Project	0-0-0 : 24	37	8	25	3	1	0	0	0	0	0	0	0
2	CE7999	Research Project	0-0-0 : 24	0	0	0	0	0	0	0	0	0	0	0	0
3	CE6001	Applied Elasticity and Plasticity	3-0-0 : 3	7	2	2	3	0	0	0	0	0	0	0	0
4	CE6105	Soil Exploration and Analysis of Foundations	3-0-0 : 3	2	0	2	0	0	0	0	0	0	0	0	0
5	CE6132	Environmental Geotechinics	3-0-0 : 3	1	0	1	0	0	0	0	0	0	0	0	0
6	CE6201	Matrix Method of Structural Analysis	3-0-0 : 3	3	0	0	3	0	0	0	0	0	0	0	0
7	CE6203	Analysis and Design of Plates and Shells	3-0-0 : 3	1	1	0	0	0	0	0	0	0	0	0	0
8	CE6231	Structural Dynamics	3-0-0 : 3	2	0	0	2	0	0	0	0	0	0	0	0
9	CE6233	Composite Structures	3-0-0 : 3	4	0	2	0	2	0	0	0	0	0	0	0
10	CE6330	Planning and Design of Airports	3-0-0 : 3	1	0	0	1	0	0	0	0	0	0	0	0
11	CE6403	Computational Fluid Dynamics	3-0-0 : 3	1	0	1	0	0	0	0	0	0	0	0	0
12	CE6431	Advanced Fluid Mechanics	3-0-0 : 3	1	0	1	0	0	0	0	0	0	0	0	0
13	CE6436	Fluvial Hydraulics	3-0-0 : 3	3	2	1	0	0	0	0	0	0	0	0	0
14	CH6433	Environmental Management System	3-0-0 : 3	3	0	1	2	0	0	0	0	0	0	0	0
15	HS7100	English for Research Writing	3-0-0 : 3	18	3	13	2	0	0	0	0	0	0	0	0
16	HS7301	Research Methodology	3-0-0 : 3	3	0	1	2	0	0	0	0	0	0	0	0
17	ME6235	Neural Network and Artificial Intelligence	3-0-0 : 3	1	0	1	0	0	0	0	0	0	0	0	0
18	CE798	Seminar and Technical Writing	0-0-3 : 2	15	1	4	7	3	0	0	0	0	0	0	0
19	CE7998	Seminar and Technical Writing	0-0-3 : 2	21	3	5	10	3	0	0	0	0	0	0	0
20	CH6471	Environmental Monitoring and Control Laboratory	0-0-3 : 2	3	0	2	1	0	0	0	0	0	0	0	0

CH : Chemical Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	CH799	Research Project	0-0-0 : 24	38	8	21	7	0	2	0	0	0	0	0	0
2	CH7999	Research Project	0-0-0 : 24	0	0	0	0	0	0	0	0	0	0	0	0
3	CH6101	Advanced Fluid Dynamics	3-0-0 : 3	4	0	0	4	0	0	0	0	0	0	0	0
4	CH6103	Advanced Mass Transfer	3-0-0 : 3	1	0	0	1	0	0	0	0	0	0	0	0
5	CH6105	Advanced Heat Transfer	3-0-0 : 3	2	0	1	1	0	0	0	0	0	0	0	0
6	CH6233	Principles of Analytical and Characterization Instruments	3-0-0 : 3	4	0	0	3	1	0	0	0	0	0	0	0
7	CH6431	Bioenergy Engineering	3-0-0 : 3	3	0	2	1	0	0	0	0	0	0	0	0
8	CH6433	Environmental Management System	3-0-0 : 3	6	0	0	3	3	0	0	0	0	0	0	0
9	HS7100	English for Research Writing	3-0-0 : 3	9	1	5	3	0	0	0	0	0	0	0	0
10	CH6471	Environmental Monitoring and Control Laboratory	0-0-3 : 2	1	0	1	0	0	0	0	0	0	0	0	0
11	CH798	Seminar and Technical Writing	0-0-3 : 2	20	0	12	8	0	0	0	0	0	0	0	0
12	CH7998	Seminar and Technical Writing	0-0-3 : 2	11	1	5	5	0	0	0	0	0	0	0	0
13	CR6175	Electrical and Electrochemical Characterization of Ceramics Laboratory	0-0-3 : 2	1	0	1	0	0	0	0	0	0	0	0	0

CR : Ceramic Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	CR799	Research Project	0-0-0 : 24	33	8	19	3	1	0	0	0	0	2	0	0
2	CR7999	Research Project	0-0-0 : 24	0	0	0	0	0	0	0	0	0	0	0	0
3	CR6101	Sintering and Microstructure	3-0-0 : 3	2	0	0	0	1	1	0	0	0	0	0	0
4	CR6131	Testing and Characterization	3-0-0 : 3	2	0	1	1	0	0	0	0	0	0	0	0
5	CR6134	Electron Microscopy	3-0-0 : 3	1	0	0	1	0	0	0	0	0	0	0	0
6	CR6333	Ceramics in Energy Sectors	3-0-0 : 3	1	0	1	0	0	0	0	0	0	0	0	0
7	HS7100	English for Research Writing	3-0-0 : 3	2	0	2	0	0	0	0	0	0	0	0	0
8	CR6175	Electrical and Electrochemical Characterization of Ceramics Laboratory	0-0-3 : 2	1	0	0	1	0	0	0	0	0	0	0	0
9	CR798	Seminar and Technical Writing	0-0-3 : 2	11	5	5	1	0	0	0	0	0	0	0	0
10	CR7998	Seminar and Technical Writing	0-0-3 : 2	4	0	0	1	3	0	0	0	0	0	0	0

CS : Computer Science and Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
1	CS799	Research Project	0-0-0 : 24	50	1	35	12	1	0	0	0	0	1	0	0
2	CS7999	Research Project	0-0-0 : 24	0	0	0	0	0	0	0	0	0	0	0	0
3	BM6301	Biomedical Signal Processing	3-0-0 : 3	1	0	0	1	0	0	0	0	0	0	0	0
4	CS6103	Data Structure and Algorithm Design	3-0-0 : 3	6	0	1	4	0	0	0	0	0	1	0	0
5	CS6114	Wireless Sensor Networks	3-0-0 : 3	2	0	1	0	1	0	0	0	0	0	0	0
6	CS6128	Cloud Computing	3-0-0 : 3	3	0	1	1	0	0	0	0	0	1	0	0
7	CS6217	Biometric Security	3-0-0 : 3	2	0	2	0	0	0	0	0	0	0	0	0
8	CS6218	Machine Learning	3-0-0 : 3	5	0	0	1	4	0	0	0	0	0	0	0
9	CS6220	Computer Vision	3-0-0 : 3	2	0	0	2	0	0	0	0	0	0	0	0
10	CS6301	Foundations of Computer Security	3-0-0 : 3	1	0	0	0	0	1	0	0	0	0	0	0
11	CS6312	Data Warehousing and Mining	3-0-0 : 3	1	0	0	1	0	0	0	0	0	0	0	0
12	CS6316	Internet of Things	3-0-0 : 3	5	0	1	3	1	0	0	0	0	0	0	0
13	CS6401	Advanced Software Engineering	3-0-0 : 3	3	0	0	2	0	1	0	0	0	0	0	0
14	CS6412	Artificial Intelligence	3-0-0 : 3	3	0	0	3	0	0	0	0	0	0	0	0
15	EE6131	Digital Image Processing	3-0-0 : 3	4	0	0	4	0	0	0	0	0	0	0	0
16	HS7100	English for Research Writing	3-0-0 : 3	15	1	12	1	0	0	0	0	0	1	0	0
17	CS6172	Network Simulation Laboratory	0-0-3 : 2	2	0	2	0	0	0	0	0	0	0	0	0
18	CS6272	Machine Learning Laboratory	0-0-3 : 2	2	0	2	0	0	0	0	0	0	0	0	0
19	CS6381	Advanced Programming Laboratory	0-0-3 : 2	1	0	0	0	0	0	0	0	0	1	0	0
20	CS798	Seminar and Technical Writing	0-0-3 : 2	21	1	12	8	0	0	0	0	0	0	0	0
21	CS7998	Seminar and Technical Writing	0-0-3 : 2	21	0	4	16	0	0	0	0	0	1	0	0

CY : Chemistry

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
1	CY799	Research Project	0-0-0 : 24	67	22	41	3	1	0	0	0	0	0	0	0
2	CY7999	Research Project	0-0-0 : 24	0	0	0	0	0	0	0	0	0	0	0	0
3	BM6401	Advanced Recombinant DNA Technology	3-0-0 : 3	1	0	0	1	0	0	0	0	0	0	0	0
4	CY6105	Advanced Environmental Chemistry	3-0-0 : 3	11	0	6	5	0	0	0	0	0	0	0	0
5	CY6107	Special Topics in Organic Synthesis	3-0-0 : 3	13	4	4	3	2	0	0	0	0	0	0	0
6	CY6302	Chemistry of Nanomaterials	3-0-0 : 3	18	2	10	6	0	0	0	0	0	0	0	0
7	CY6303	Computational Methods in Chemistry	3-0-0 : 3	16	2	6	8	0	0	0	0	0	0	0	0
8	CY6306	Special Topics in Physical Chemistry	3-0-0 : 3	14	2	5	4	3	0	0	0	0	0	0	0
9	FP6101	Advanced Food Analysis and Quality Control	3-0-0 : 3	1	0	0	1	0	0	0	0	0	0	0	0
10	HS7100	English for Research Writing	3-0-0 : 3	28	7	16	5	0	0	0	0	0	0	0	0
11	LS6003	Advanced Microbiology	3-0-0 : 3	1	0	0	1	0	0	0	0	0	0	0	0
12	CY798	Seminar and Technical Writing	0-0-3 : 2	53	0	29	24	0	0	0	0	0	0	0	0
13	CY7998	Seminar and Technical Writing	0-0-3 : 2	35	0	15	20	0	0	0	0	0	0	0	0

EC : Electronics and Communication Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
1	EC799	Research Project	0-0-0 : 24	59	8	30	17	3	1	0	0	0	0	0	0
2	EC7999	Research Project	0-0-0 : 24	0	0	0	0	0	0	0	0	0	0	0	0
3	EC6201	Digital VLSI Design	3-0-0 : 3	6	1	1	2	1	0	0	0	0	1	0	0
4	EC6203	Reconfigurable System Design	3-0-0 : 3	7	1	2	3	0	0	0	0	0	1	0	0
5	EC6205	Integrated Circuit for Digital Signal Processing	3-0-0 : 3	1	0	1	0	0	0	0	0	0	0	0	0
6	EC6213	Micro-Electronic Devices and Applications	3-0-0 : 3	2	0	0	1	0	0	1	0	0	0	0	0
7	EC6303	Advanced Instrumentation and Signal Conditioning	3-0-0 : 3	2	0	0	1	1	0	0	0	0	0	0	0
8	EC6401	Microwave Devices and Circuits	3-0-0 : 3	4	0	4	0	0	0	0	0	0	0	0	0
9	EC6403	Modern Radar Systems	3-0-0 : 3	2	0	2	0	0	0	0	0	0	0	0	0
10	EC6405	Advanced Electromagnetic Theory	3-0-0 : 3	2	0	1	1	0	0	0	0	0	0	0	0
11	EC6501	Data Communication Networks	3-0-0 : 3	1	0	1	0	0	0	0	0	0	0	0	0
12	EC6503	Statistical Signal Theory	3-0-0 : 3	3	1	2	0	0	0	0	0	0	0	0	0
13	EC6505	Advanced Digital Communication	3-0-0 : 3	2	1	0	1	0	0	0	0	0	0	0	0
14	EC6515	Mobile Communication	3-0-0 : 3	3	0	1	1	1	0	0	0	0	0	0	0
15	EC6601	Advanced Digital Signal Processing	3-0-0 : 3	2	0	0	1	1	0	0	0	0	0	0	0
16	EC6603	Computer Vision	3-0-0 : 3	1	0	0	1	0	0	0	0	0	0	0	0
17	EC6609	Soft Computing	3-0-0 : 3	1	0	1	0	0	0	0	0	0	0	0	0
18	HS7100	English for Research Writing	3-0-0 : 3	15	2	10	2	0	0	1	0	0	0	0	0

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
19	EC6271	VLSI Design Laboratory	0-0-3 : 2	5	0	5	0	0	0	0	0	0	0	0	0
20	EC6275	Reconfigurable System Design Laboratory	0-0-3 : 2	6	1	5	0	0	0	0	0	0	0	0	0
21	EC6371	Advanced Instrumentation Laboratory	0-0-3 : 2	2	0	2	0	0	0	0	0	0	0	0	0
22	EC6471	Microwave Circuits Design Laboratory	0-0-3 : 2	4	1	3	0	0	0	0	0	0	0	0	0
23	EC6571	Data Communication Networks Laboratory	0-0-3 : 2	1	1	0	0	0	0	0	0	0	0	0	0
24	EC6575	Advanced Digital Communication Laboratory	0-0-3 : 2	2	0	2	0	0	0	0	0	0	0	0	0
25	EC6671	Advanced Digital Signal Processing Laboratory	0-0-3 : 2	2	0	2	0	0	0	0	0	0	0	0	0
26	EC6673	Computer Vision Laboratory	0-0-3 : 2	2	0	1	1	0	0	0	0	0	0	0	0
27	EC798	Seminar and Technical Writing	0-0-3 : 2	37	10	27	0	0	0	0	0	0	0	0	0
28	EC7998	Seminar and Technical Writing	0-0-3 : 2	25	11	14	0	0	0	0	0	0	0	0	0

EE : Electrical Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
1	EE799	Research Project	0-0-0 : 24	54	6	40	6	2	0	0	0	0	0	0	0
2	EE7999	Research Project	0-0-0 : 24	0	0	0	0	0	0	0	0	0	0	0	0
3	CS6218	Machine Learning	3-0-0 : 3	2	0	0	0	2	0	0	0	0	0	0	0
4	EC6501	Data Communication Networks	3-0-0 : 3	2	0	0	1	1	0	0	0	0	0	0	0
5	EE6101	Advanced Communication Techniques	3-0-0 : 3	4	0	0	2	2	0	0	0	0	0	0	0
6	EE6103	Advanced Signal Processing	3-0-0 : 3	2	0	0	2	0	0	0	0	0	0	0	0
7	EE6105	Microwave and Antenna Systems	3-0-0 : 3	3	0	1	2	0	0	0	0	0	0	0	0
8	EE6131	Digital Image Processing	3-0-0 : 3	2	0	0	1	1	0	0	0	0	0	0	0
9	EE6201	Power System Analysis and Control	3-0-0 : 3	1	0	0	0	1	0	0	0	0	0	0	0
10	EE6203	Power System Dynamics	3-0-0 : 3	2	0	0	2	0	0	0	0	0	0	0	0
11	EE6205	Extra High Voltage Transmission	3-0-0 : 3	1	0	0	1	0	0	0	0	0	0	0	0
12	EE6243	Soft Computing Techniques	3-0-0 : 3	4	0	0	1	2	1	0	0	0	0	0	0
13	EE6305	Digital Control	3-0-0 : 3	1	0	0	0	1	0	0	0	0	0	0	0
14	EE6403	Power Electronic Converters and Machine Drives	3-0-0 : 3	2	0	1	1	0	0	0	0	0	0	0	0
15	EE6405	Control of Electric Drives	3-0-0 : 3	1	1	0	0	0	0	0	0	0	0	0	0
16	EE6441	Wind and Solar Energy Systems	3-0-0 : 3	3	0	0	2	1	0	0	0	0	0	0	0
17	EE6443	SWITCHED MODE POWER CONVERSION	3-0-0 : 3	2	0	0	1	1	0	0	0	0	0	0	0
18	HS7100	English for Research Writing	3-0-0 : 3	12	1	8	3	0	0	0	0	0	0	0	0
19	ME6105	Control System Engineering	3-0-0 : 3	1	1	0	0	0	0	0	0	0	0	0	0
20	MM6529	Surface Engineering	3-0-0 : 3	1	0	1	0	0	0	0	0	0	0	0	0
21	CS6272	Machine Learning Laboratory	0-0-3 : 2	2	0	1	1	0	0	0	0	0	0	0	0
22	EC6571	Data Communication Networks Laboratory	0-0-3 : 2	1	0	1	0	0	0	0	0	0	0	0	0
23	EE6171	Electronic Devices and Systems Laboratory	0-0-3 : 2	3	0	0	2	1	0	0	0	0	0	0	0
24	EE6173	Signal and Image Processing Laboratory	0-0-3 : 2	2	0	0	2	0	0	0	0	0	0	0	0
25	EE6271	Power System Laboratory	0-0-3 : 2	1	0	1	0	0	0	0	0	0	0	0	0
26	EE6471	Power Electronics and Drives Laboratory-I	0-0-3 : 2	1	1	0	0	0	0	0	0	0	0	0	0
27	EE6473	Advanced Machines Laboratory	0-0-3 : 2	1	1	0	0	0	0	0	0	0	0	0	0
28	EE798	Seminar and Technical Writing	0-0-3 : 2	33	4	26	3	0	0	0	0	0	0	0	0
29	EE7998	Seminar and Technical Writing	0-0-3 : 2	25	0	16	7	2	0	0	0	0	0	0	0

ER : Earth and Atmospheric Sciences

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	EX	A	B	C	D	P	S	U	F	X	I
1	ER799	Research Project	0-0-0 : 24	21	3	14	4	0	0	0	0	0	0	0	0
2	ER7999	Research Project	0-0-0 : 24	0	0	0	0	0	0	0	0	0	0	0	0
3	ER6003	Applied Hydrogeology	3-0-0 : 3	5	0	2	3	0	0	0	0	0	0	0	0
4	ER6005	Applied Isotop geology	3-0-0 : 3	5	0	0	4	1	0	0	0	0	0	0	0
5	ER6011	Theoretical Meteorology	3-0-0 : 3	8	2	4	2	0	0	0	0	0	0	0	0
6	ER6013	Applied Atmospheric Dynamics	3-0-0 : 3	7	1	1	4	1	0	0	0	0	0	0	0
7	ER6015	Physical and dynamical Oceanography	3-0-0 : 3	10	1	8	1	0	0	0	0	0	0	0	0
8	ER6021	Introduction to Climate Science	3-0-0 : 3	7	0	0	5	2	0	0	0	0	0	0	0
9	ER6023	Introduction to Earth Science	3-0-0 : 3	2	0	1	0	1	0	0	0	0	0	0	0
10	HS7100	English for Research Writing	3-0-0 : 3	12	1	8	3	0	0	0	0	0	0	0	0
11	ER6073	Programming Laboratory	0-0-3 : 2	4	0	4	0	0	0	0	0	0	0	0	0
12	ER798	Seminar and Technical Writing	0-0-3 : 2	10	0	6	4	0	0	0	0	0	0	0	0
13	ER7998	Seminar and Technical Writing	0-0-3 : 2	15	0	9	6	0	0	0	0	0	0	0	0

FP : Food Process Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	FP799	Research Project	0-0-0 : 24	14	2	9	3	0	0	0	0	0	0	0	0
2	FP7999	Research Project	0-0-0 : 24	0	0	0	0	0	0	0	0	0	0	0	0
3	CH6301	Modeling and Analysis of Energy Systems	3-0-0 : 3	1	0	1	0	0	0	0	0	0	0	0	0
4	FP6101	Advanced Food Analysis and Quality Control	3-0-0 : 3	4	0	0	3	0	0	0	0	0	1	0	0
5	FP6235	Advanced Thermal Operation in Food Processing	3-0-0 : 3	6	0	5	0	0	0	0	0	0	1	0	0
6	HS7100	English for Research Writing	3-0-0 : 3	9	0	6	1	0	1	0	0	0	1	0	0
7	LS6007	Food Microbiology	3-0-0 : 3	4	1	1	1	0	0	0	0	0	1	0	0
8	FP798	Seminar and Technical Writing	0-0-3 : 2	8	2	6	0	0	0	0	0	0	0	0	0
9	FP7998	Seminar and Technical Writing	0-0-3 : 2	10	2	7	0	0	0	0	0	0	1	0	0

HS : Humanities and Social Sciences

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	HS799	Research Project	0-0-0 : 24	35	1	29	4	1	0	0	0	0	0	0	0
2	HS7999	Research Project	0-0-0 : 24	0	0	0	0	0	0	0	0	0	0	0	0
3	HS7100	English for Research Writing	3-0-0 : 3	11	2	4	5	0	0	0	0	0	0	0	0
4	HS7107	Critical Approaches	3-0-0 : 3	2	0	2	0	0	0	0	0	0	0	0	0
5	HS7108	Reading Theses	3-0-0 : 3	2	0	2	0	0	0	0	0	0	0	0	0
6	HS7204	Developing and Managing Human Resources	3-0-0 : 3	1	0	1	0	0	0	0	0	0	0	0	0
7	HS7301	Research Methodology	3-0-0 : 3	7	0	2	5	0	0	0	0	0	0	0	0
8	HS7303	Social Change	3-0-0 : 3	4	0	4	0	0	0	0	0	0	0	0	0
9	HS7305	Contemporary theories in Sociology and Social Anthropology	3-0-0 : 3	2	0	2	0	0	0	0	0	0	0	0	0
10	HS7306	Environment and Society	3-0-0 : 3	5	0	2	3	0	0	0	0	0	0	0	0
11	HS7308	Ethics and Values	3-0-0 : 3	6	0	4	2	0	0	0	0	0	0	0	0
12	HS7401	Introduction to Economic Growth And Development	3-0-0 : 3	1	0	1	0	0	0	0	0	0	0	0	0
13	HS7402	Economic Evaluation of Health Care	3-0-0 : 3	2	0	2	0	0	0	0	0	0	0	0	0
14	HS7404	International Economics	3-0-0 : 3	1	0	1	0	0	0	0	0	0	0	0	0
15	HS798	Seminar and Technical Writing	0-0-3 : 2	31	0	18	13	0	0	0	0	0	0	0	0
16	HS7998	Seminar and Technical Writing	0-0-3 : 2	14	0	10	4	0	0	0	0	0	0	0	0

ID : Industrial Design

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	ID799	Research Project	0-0-0 : 24	9	2	4	3	0	0	0	0	0	0	0	0
2	HS7100	English for Research Writing	3-0-0 : 3	2	0	1	1	0	0	0	0	0	0	0	0
3	ID6103	Form Studies	3-0-0 : 3	2	0	1	1	0	0	0	0	0	0	0	0
4	ID6201	User Experience Design	3-0-0 : 3	2	0	1	1	0	0	0	0	0	0	0	0
5	ID6233	Computer Aided Geometric Design	3-0-0 : 3	2	0	1	1	0	0	0	0	0	0	0	0
6	ID6331	Advanced Product Design and Development	3-0-0 : 3	2	0	0	0	1	1	0	0	0	0	0	0
7	ID6171	Sketching and Rendering Laboratory	0-0-3 : 2	1	0	0	1	0	0	0	0	0	0	0	0
8	ID6173	Design Practice	0-0-3 : 2	1	1	0	0	0	0	0	0	0	0	0	0
9	ID798	Seminar and Technical Writing	0-0-3 : 2	6	0	5	1	0	0	0	0	0	0	0	0
10	ID7998	Seminar and Technical Writing	0-0-3 : 2	2	0	1	1	0	0	0	0	0	0	0	0

LS : Life Science

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	LS799	Research Project	0-0-0 : 24	54	10	40	4	0	0	0	0	0	0	0	0
2	LS7999	Research Project	0-0-0 : 24	0	0	0	0	0	0	0	0	0	0	0	0
3	HS7100	English for Research Writing	3-0-0 : 3	11	1	7	1	0	0	1	0	0	1	0	0
4	LS6003	Advanced Microbiology	3-0-0 : 3	7	1	5	0	0	0	0	0	0	1	0	0
5	LS6004	Cell Signalling	3-0-0 : 3	9	1	4	2	0	0	0	0	0	2	0	0
6	LS6005	Epigenetics	3-0-0 : 3	2	0	1	0	0	0	0	0	0	1	0	0
7	LS6006	Developmental Genetics	3-0-0 : 3	3	1	2	0	0	0	0	0	0	0	0	0
8	LS6007	Food Microbiology	3-0-0 : 3	7	2	3	1	0	0	0	0	0	1	0	0
9	LS6011	Molecular Pathogenesis	3-0-0 : 3	2	1	0	0	0	0	0	0	0	1	0	0
10	LS6013	Research Methodology	3-0-0 : 3	6	1	4	0	0	0	0	0	0	1	0	0
11	LS798	Seminar and Technical Writing	0-0-3 : 2	39	8	29	2	0	0	0	0	0	0	0	0
12	LS7998	Seminar and Technical Writing	0-0-3 : 2	20	3	14	1	0	0	0	0	0	2	0	0

MA : Mathematics

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	MA799	Research Project	0-0-0 : 24	49	0	32	13	4	0	0	0	0	0	0	0
2	MA7999	Research Project	0-0-0 : 24	0	0	0	0	0	0	0	0	0	0	0	0
3	MA6103	Advanced Complex Analysis	3-1-0 : 4	3	0	0	3	0	0	0	0	0	0	0	0
4	MA6107	Advanced Linear Algebra	3-1-0 : 4	6	0	0	2	3	0	1	0	0	0	0	0
5	MA6305	Advanced Numerical Analysis	3-1-0 : 4	8	0	0	6	2	0	0	0	0	0	0	0
6	MA6611	Analysis	3-1-0 : 4	10	0	1	5	4	0	0	0	0	0	0	0
7	MA6613	Functional Analysis with Applications	3-1-0 : 4	1	0	1	0	0	0	0	0	0	0	0	0
8	MA6631	Advanced Fluid Dynamics	3-1-0 : 4	2	0	2	0	0	0	0	0	0	0	0	0
9	MA6645	Group Theory and its Application	3-1-0 : 4	4	0	1	2	0	0	1	0	0	0	0	0
10	MA6647	Abstract Algebras with its Application	3-1-0 : 4	3	0	3	0	0	0	0	0	0	0	0	0
11	HS7100	English for Research Writing	3-0-0 : 3	12	0	10	1	0	0	1	0	0	0	0	0
12	MA6621	Probability and Statistics	3-0-0 : 3	3	0	3	0	0	0	0	0	0	0	0	0
13	MA798	Seminar and Technical Writing	0-0-3 : 2	39	0	19	16	4	0	0	0	0	0	0	0
14	MA7998	Seminar and Technical Writing	0-0-3 : 2	23	0	7	11	5	0	0	0	0	0	0	0

ME : Mechanical Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	ME799	Research Project	0-0-0 : 24	78	49	16	8	3	1	0	0	0	1	0	0
2	ME7999	Research Project	0-0-0 : 24	0	0	0	0	0	0	0	0	0	0	0	0
3	BM6133	Nanotechnology in Medical Applications	3-0-0 : 3	1	0	0	1	0	0	0	0	0	0	0	0
4	HS7100	English for Research Writing	3-0-0 : 3	9	1	7	1	0	0	0	0	0	0	0	0
5	ME6135	Applied Finite Element Analysis	3-0-0 : 3	1	1	0	0	0	0	0	0	0	0	0	0
6	ME6201	Applied Elasticity and Plasticity	3-0-0 : 3	1	0	0	1	0	0	0	0	0	0	0	0
7	ME6203	Production Technology	3-0-0 : 3	2	0	0	2	0	0	0	0	0	0	0	0
8	ME6235	Neural Network and Artificial Intelligence	3-0-0 : 3	2	1	1	0	0	0	0	0	0	0	0	0
9	ME6237	Production Planning and Control	3-0-0 : 3	1	0	1	0	0	0	0	0	0	0	0	0
10	ME6301	Heat Transfer – I: Conduction and Radiation Heat Transfer	3-0-0 : 3	4	0	4	0	0	0	0	0	0	0	0	0
11	ME6303	Advanced Fluid Mechanics	3-0-0 : 3	4	1	3	0	0	0	0	0	0	0	0	0
12	ME6337	Experimental Methods in Thermal Engineering	3-0-0 : 3	3	0	2	1	0	0	0	0	0	0	0	0
13	ME6341	Refrigeration and Cryogenic Systems	3-0-0 : 3	1	0	1	0	0	0	0	0	0	0	0	0
14	ME6371	Computational Fluid Flow Laboratory	0-0-3 : 2	2	1	0	1	0	0	0	0	0	0	0	0
15	ME798	Seminar and Technical Writing	0-0-3 : 2	33	19	12	0	0	0	0	0	0	2	0	0
16	ME7998	Seminar and Technical Writing	0-0-3 : 2	13	5	6	0	2	0	0	0	0	0	0	0

MM : Metallurgical and Materials Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	MM799	Research Project	0-0-0 : 24	38	9	28	1	0	0	0	0	0	0	0	0
2	HS7100	English for Research Writing	3-0-0 : 3	4	2	1	0	0	0	0	0	0	1	0	0
3	MM6311	Metallurgical Thermodynamics and Kinetics	3-0-0 : 3	2	0	1	0	0	0	0	0	0	1	0	0
4	MM6521	Powder Technology	3-0-0 : 3	2	0	1	1	0	0	0	0	0	0	0	0
5	MM6523	Experimental Techniques in Materials Engineering	3-0-0 : 3	3	0	0	2	0	0	0	0	0	1	0	0
6	MM6529	Surface Engineering	3-0-0 : 3	1	0	1	0	0	0	0	0	0	0	0	0
7	MM798	Seminar and Technical Writing	0-0-3 : 2	13	1	7	5	0	0	0	0	0	0	0	0
8	MM7998	Seminar and Technical Writing	0-0-3 : 2	4	0	2	1	0	0	0	0	0	1	0	0

MN : Mining Engineering

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	MN799	Research Project	0-0-0 : 24	13	3	8	1	0	0	0	0	0	1	0	0
2	MN7999	Research Project	0-0-0 : 24	0	0	0	0	0	0	0	0	0	0	0	0
3	MA2203	Introduction to Probability and Statistics	3-1-0 : 4	1	0	0	1	0	0	0	0	0	0	0	0
4	CE6101	Advanced Soil Mechanics	3-0-0 : 3	1	1	0	0	0	0	0	0	0	0	0	0
5	CE6105	Soil Exploration and Analysis of Foundations	3-0-0 : 3	1	0	0	1	0	0	0	0	0	0	0	0
6	CE6132	Environmental Geotechnics	3-0-0 : 3	1	0	0	1	0	0	0	0	0	0	0	0
7	CH6233	Principles of Analytical and Characterization Instruments	3-0-0 : 3	3	0	0	2	1	0	0	0	0	0	0	0

8	CH6301	Modeling and Analysis of Energy Systems	3-0-0 : 3	1	1	0	0	0	0	0	0	0	0	0	0
9	CY6105	Advanced Environmental Chemistry	3-0-0 : 3	3	0	3	0	0	0	0	0	0	0	0	0
10	ER6003	Applied Hydrogeology	3-0-0 : 3	1	0	1	0	0	0	0	0	0	0	0	0
11	HS7100	English for Research Writing	3-0-0 : 3	13	0	8	3	0	0	1	0	0	1	0	0
12	MA6621	Probability and Statistics	3-0-0 : 3	1	0	0	1	0	0	0	0	0	0	0	0
13	MN6035	Mine Systems Engineering	3-0-0 : 3	5	0	0	0	3	0	1	0	0	1	0	0
14	MN6101	Rock Excavation Enggineering	3-0-0 : 3	8	0	3	5	0	0	0	0	0	0	0	0
15	MN6122	Rock Slope Technology	3-0-0 : 3	4	0	2	2	0	0	0	0	0	0	0	0
16	MN6162	Advanced Coal Mining	3-0-0 : 3	2	1	1	0	0	0	0	0	0	0	0	0
17	MN6201	Environmental Control and Management	3-0-0 : 3	9	2	3	2	1	0	1	0	0	0	0	0
18	MN6254	Mine Fires and spontaneous heating	3-0-0 : 3	3	0	0	1	0	0	1	0	0	1	0	0
19	MN6261	Safety Risk Assessment and Management	3-0-0 : 3	1	0	0	0	0	0	0	0	0	1	0	0
20	MN6171	Geotechnical Laboratory	0-0-3 : 2	6	2	2	2	0	0	0	0	0	0	0	0
21	MN6271	Environmental Enggineering Laboratory	0-0-3 : 2	3	2	1	0	0	0	0	0	0	0	0	0
22	MN798	Seminar and Technical Writing	0-0-3 : 2	4	3	0	1	0	0	0	0	0	0	0	0
23	MN7998	Seminar and Technical Writing	0-0-3 : 2	13	7	3	1	0	0	0	0	0	2	0	0

PH : Physics and Astronomy

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	PH799	Research Project	0-0-0 : 24	52	0	44	7	0	0	0	0	0	1	0	0
2	PH7999	Research Project	0-0-0 : 24	0	0	0	0	0	0	0	0	0	0	0	0
3	HS7100	English for Research Writing	3-0-0 : 3	13	3	8	2	0	0	0	0	0	0	0	0
4	PH6005	Experimental Techniques in Physics	3-0-0 : 3	12	0	3	6	3	0	0	0	0	0	0	0
5	PH6009	Numerical Analysis in Computer Programming	3-0-0 : 3	12	0	1	3	8	0	0	0	0	0	0	0
6	PH6111	Advanced Quantum Mechanics	3-0-0 : 3	1	0	0	1	0	0	0	0	0	0	0	0
7	PH6114	Non – Linear Dynamics, Chaos and Its Recent Applications	3-0-0 : 3	1	0	1	0	0	0	0	0	0	0	0	0
8	PH6117	Introduction To Astrophysics	3-0-0 : 3	6	1	3	2	0	0	0	0	0	0	0	0
9	PH6466	Low Temperature Properties of Matter	3-0-0 : 3	5	0	1	4	0	0	0	0	0	0	0	0
10	PH798	Seminar and Technical Writing	0-0-3 : 2	30	0	11	18	1	0	0	0	0	0	0	0
11	PH7998	Seminar and Technical Writing	0-0-3 : 2	17	0	1	8	8	0	0	0	0	0	0	0

SM : School of Management

#	Subject Code	Subject Name	L-T-P : Credit	No. Enrolled	Grade Distribution										
					EX	A	B	C	D	P	S	U	F	X	I
1	SM799	Research Project	0-0-0 : 24	19	0	8	10	1	0	0	0	0	0	0	0
2	SM7999	Research Project	0-0-0 : 24	0	0	0	0	0	0	0	0	0	0	0	0
3	HS7100	English for Research Writing	3-0-0 : 3	10	1	6	2	1	0	0	0	0	0	0	0
4	SM6111	Financial Institutions, Instruments and Markets	3-0-0 : 3	1	0	1	0	0	0	0	0	0	0	0	0
5	SM6121	Financial Derivatives	3-0-0 : 3	1	0	1	0	0	0	0	0	0	0	0	0
6	SM6151	Security Analysis and Portfolio Management	3-0-0 : 3	1	0	0	1	0	0	0	0	0	0	0	0
7	SM6201	Marketing Management	3-0-0 : 3	4	1	2	1	0	0	0	0	0	0	0	0
8	SM6211	Consumer Behaviour and Marketing Research	3-0-0 : 3	5	1	2	2	0	0	0	0	0	0	0	0
9	SM6221	Strategic Brand Management	3-0-0 : 3	2	0	2	0	0	0	0	0	0	0	0	0
10	SM6231	Retail Management	3-0-0 : 3	3	0	3	0	0	0	0	0	0	0	0	0
11	SM6241	Industrial Marketing	3-0-0 : 3	1	0	1	0	0	0	0	0	0	0	0	0
12	SM6301	Organizational Behavior and Structure	3-0-0 : 3	1	0	1	0	0	0	0	0	0	0	0	0
13	SM6311	Employee Relations and Labour Legislations	3-0-0 : 3	1	0	1	0	0	0	0	0	0	0	0	0
14	SM6351	Employee Compensation and Benefits Managemen	3-0-0 : 3	3	0	2	1	0	0	0	0	0	0	0	0
15	SM6361	Talent Management	3-0-0 : 3	2	1	1	0	0	0	0	0	0	0	0	0
16	SM6611	Business Research Methodology	3-0-0 : 3	7	0	6	1	0	0	0	0	0	0	0	0
17	SM6271	Leadership Laboratory	0-0-2 : 2	1	0	1	0	0	0	0	0	0	0	0	0
18	SM6371	IGBO Laboratory	2-0-0 : 2	2	0	1	1	0	0	0	0	0	0	0	0
19	SM6471	OR Laboratory	0-0-2 : 2	1	0	0	1	0	0	0	0	0	0	0	0
20	SM6571	Basic Computer Laboratory	0-0-2 : 2	4	0	4	0	0	0	0	0	0	0	0	0
21	SM6671	Language Laboratory	0-0-2 : 2	3	0	3	0	0	0	0	0	0	0	0	0
22	SM798	Seminar and Technical Writing	0-0-3 : 2	19	0	0	18	1	0	0	0	0	0	0	0
23	SM7998	Seminar and Technical Writing	0-0-3 : 2	15	0	0	15	0	0	0	0	0	0	0	0

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REVISED GRADE REPORT (2021-22 - AUTUMN)   24-Dec-2021

#	Subject	Subject Name	Credit	RollNo	Student Name	Class	Absent	Total Absent	Given Grdae	Revised Grade	Reason
1	CE2001	Civil Engineering Materials and Construction	3	118CE0044	SANJAY DUDI	-	-	-	C	D	Due to Backlog
2	CE2003	Mechanics of Solids	3	118CE0066	SAURABH RAJ	-	-	-	D	P	Due to Backlog
				119CE0034	DEVANSHI MAHANANDA	-	-	-	C	D	Due to Backlog
				119CE0970	GANKIDI PRAMODH REDDY	-	-	-	D	P	Due to Backlog
				718MN1036	AREKANTI WILSON	-	-	-	D	P	Due to Backlog
3	CR2401	Unit Operations in Ceramic Processing	3	719CR2020	ASHUTOSH BHAGAT	-	-	-	C	D	Due to Backlog
4	CR3103	Application of Phase Diagram	3	117CR0708	ABHIJEET MALLICK	-	-	-	D	P	Due to Backlog
5	CS2005	Data Structures and Algorithms	3	119CS0510	SHUBHAM ANAND	-	-	-	C	D	Due to Backlog
6	CY3301	Physical Chemistry: Matters and Surface	3	416LS5011	RINKESH RAJESH KANEKAR	-	-	-	D	P	Due to Backlog
7	EE3000	Electrical Machines	3	119FP0906	SURAJ SURESHRAO PATIL	1	1	-	B	C	Alternative Mid Semester
8	EE3301	Principles of Control Systems Engineering	3	118EE0296	ANKITA KISHAN	-	-	-	D	P	Due to Backlog
9	EE6441	Wind and Solar Energy Systems	3	920EE5006	GOURAV SHANKAR	-	-	-	F	D	Higher of Two Grade
10	HS1321	Introduction to Psychology	3	419CY5020	BIPLAB DAS	-	-	-	C	D	Due to Backlog
11	HS1340	Principles of Economics	3	119CS0510	SHUBHAM ANAND	-	-	-	C	D	Due to Backlog
12	MA2203	Introduction to Probability and Statistics	4	119CS0510	SHUBHAM ANAND	-	-	-	C	D	Due to Backlog
13	ME6335	Thermodynamics of Cryogenic System	3	221ME3121	RANGASWAMY PERUMALLA	31	3	-	B	C	Alternative Mid Semester
14	PH4005	Quantum Mechanics - I	4	417PH5045	RISHI KUMAR VISHWAKARMA	-	-	-	D	P	Due to Backlog
15	SM6101	Financial and Cost Accounting	3	321SM1014	SUBHAM DEY	33	7	-	C	D	Alternative Mid Semester
16	SM6501	Management Information Systems	3	321SM1014	SUBHAM DEY	36	8	-	B	C	Alternative Mid Semester

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CGPA < 6.00 IN ONE SEMESTER (2021-22 : AUTUMN)   24-Dec-2021

NOTE :

#	RollNo	Student Name	Semester	CGPA
1	120BT0821	ARYAN ANURAG TIBREWALA	1st	2.73
2	120BT1118	ELIAS ENEYEW KASSIE	1st	2.00
3	120EI0889	ANNAS FURQUAN PASHA	1st	2.17
4	219ME2563	PYLA SASANK	1st	1.37
5	219ME5407	SHARE ZAMAN	1st	4.05
6	219ME5574	UJJWAL KUMAR	1st	3.00
7	220BM1002	KANHU CHARAN KHADANGA	1st	2.00
8	220CE3157	BULUSU SAI SRAVAN KUMAR	1st	2.32
9	220CR2249	MUCHINTHALA RADHAKRISHNA	1st	2.00
10	220CS2261	SAMIR KUMAR SINHA	1st	2.00
11	220CS2607	SUYASH MUSALGAONKAR	1st	3.42
12	220CS3187	ASHIM GULERIA	1st	2.00
13	220CS3269	SHIVAM DALMIA	1st	2.00
14	220CS3270	GUDURI ACHYUTH KUMAR	1st	2.00
15	220EC2514	UBAID RAHMAN KK	1st	2.00
16	220EC3069	SANDEEP KUMAR	1st	2.42
17	220EC3530	NEHA KERKETTA	1st	2.00
18	220EC3535	VIGHNESH SINGH	1st	2.32
19	220EC6571	SAYYEDHUSSAIN SIDDIQUI	1st	2.32
20	220EE1291	PUJA SINGH	1st	2.00
21	220EE3121	RAJU DALAI	1st	2.00
22	220EE4323	BILLA RAKESH	1st	3.37
23	220EE6327	VIVEK SINGH	1st	2.00
24	220ID1363	ANKIT KUMAR	1st	3.84
25	220ID1368	SAJAL PRUSTY	1st	3.84

26	220ID1640	SAURABH BHAGWAN DHAKARE	1st	3.68
27	221BM1005	MEGHANT PRASAD CHOWDHARY	1st	2.00
28	221BM1010	S JEROM VISHAL	1st	2.00
29	221BM1157	ROUTU VENKATA CHIRANJEEVI	1st	2.00
30	221BM1163	ARJOON R S	1st	2.00
31	221BM1165	PUJA SINGH	1st	2.00
32	221BM2021	RAKESH V R	1st	3.00
33	221CE1032	BISWAJYOTI GHOSH	1st	2.00
34	221CE1033	AVINASH PRASAD	1st	2.00
35	221CE1035	ASHUTOSH SAHOO	1st	2.00
36	221CE1178	PRADUM KUMAR GUPTA	1st	2.00
37	221CE1186	MAYANK VERMA	1st	2.00
38	221CE2194	VINEET KUMAR	1st	2.00
39	221CE2204	SUBHAJEET SIKDAR	1st	2.47
40	221CE3042	VIKASH KUMAR	1st	5.79
41	221CE4579	SUBHAJIT MONDAL	1st	2.00
42	221CH1055	ABHISHEK KUMAR	1st	2.95
43	221CH1243	SHIVANI	1st	2.95
44	221CH3249	AGNIV MONDAL	1st	2.95
45	221CH3257	VIKRANT SHISHODIA	1st	2.95
46	221CH3568	LOK PRAKASH DEO	1st	5.74
47	221CS1274	RAJESH PAUL	1st	2.89
48	221CS1279	K VARALAKSHMI	1st	5.63
49	221CS2066	SWARNENDU SARDAR	1st	5.95
50	221CS2299	PURUSHOTTAM TRIVEDI	1st	2.00
51	221CS2610	SANTOSH KUMAR BEHERA	1st	2.00
52	221CS3305	PRIYANSHU KUMAR CHAUDHARY	1st	2.00
53	221CS3308	ABHAY GARG	1st	2.00
54	221EC2341	BHUKYA SUSHMA DEEPTHI RATHOD	1st	2.53
55	221EC2344	ADARSH VERMA	1st	2.74
56	221EC2555	ATHIRASREE C A	1st	3.11
57	221EC3144	PILLA GANGADHAR	1st	2.89

58	221EC3145	S M LAKSHMI SARVANI GUNTUBOYINA	1st	2.00
59	221EC3356	CHERUKURI SYAM SANDEEP	1st	5.84
60	221EC3585	MD BELAL ARSHAD	1st	5.84
61	221EC5380	UMMADISETTY TEJASWINI	1st	2.74
62	221EC6387	RAJ KUMAR EKKA	1st	2.00
63	221EC6392	RAHUL PANDEY	1st	2.00
64	221EC6398	SURAJ SHAW	1st	2.00
65	221EC6606	ABISHEK GOURAVE	1st	2.00
66	221EE1152	AMIT KUMAR DAS	1st	5.95
67	221EE1409	SREERANJINI A	1st	2.00
68	221EE1416	SAURABH KUMAR	1st	2.00
69	221EE3421	BHARGAV S AMMU	1st	2.00
70	221EE3427	PANKAJ KUMAR	1st	5.26
71	221EE3431	SANDHEER KUMAR SINGH	1st	5.95
72	221EE3607	SAIJASI CHAUBEY	1st	2.00
73	221EE3608	NAVYA PRAGATHI MOLUGARAM	1st	2.00
74	221EE4080	NIKITA KUMARI	1st	2.00
75	221EE4082	CHETAN SINGH RAWAT	1st	2.00
76	221EE4084	MAAN SINGH	1st	2.00
77	221EE6085	SHUBHANSHU	1st	4.53
78	221EE6088	ARINDAM MONDAL	1st	2.00
79	221EE6451	RAVI	1st	4.68
80	221EE6467	MD SHARFUDDIN	1st	2.00
81	221FP1473	THATIPARTHI BOBBY REDDY	1st	2.00
82	221ID1486	MANIMARAN S	1st	2.00
83	221ME1502	SOUVIK MONDAL	1st	2.47
84	221ME2516	RAJESH PARSHURAM MADARI	1st	2.00
85	221ME3122	GOUTHU NIREEKSHANA RAO	1st	2.53
86	221ME3535	RITISH ROUT	1st	2.32
87	221ME5126	ANANT VINAYAK MAGAR	1st	2.32
88	221ME5128	ABHINAV PAL	1st	2.74
89	221ME5599	ALIND DWIVEDI	1st	2.63

90	221MM1130	ABHINAV AKASH	1st	2.00
91	221MM1132	AVINASH KUMAR CHATURVEDI	1st	2.00
92	221MM1549	ABHIJITH C R	1st	2.00
93	221MM1600	YUGESH KUMAR DAS	1st	2.00
94	221MN1137	POTHIREDDYGARI MURALIDHAR REDDY	1st	2.00
95	321SM1019	SILVIYA JENA	1st	2.65
96	420CY5045	HEENA PRIYADARSHINI AMAT	1st	2.18
97	420HS1015	DEBARATI ROY	1st	2.63
98	420LS2042	ROHINI BHATT	1st	2.00
99	420LS5085	PRITINANDA PANDA	1st	2.18
100	420PH2065	UTKARSH SINHA	1st	2.60
101	420PH2120	SHREYA DEBNATH	1st	2.60
102	421AG2145	HARSHIT SINHA	1st	3.50
103	421HS1008	RAJA BARMAN	1st	3.16
104	421HS1009	SUBRATA SARMAH BARUAH	1st	3.05
105	421HS1011	NEELESH CHAURASIYA	1st	3.05
106	421HS1016	ANAMIKA K H	1st	3.16
107	421HS1021	PRANJALI PRAVIN PADOLE	1st	2.53
108	421HS1030	ABHISHEK YADAV	1st	3.26
109	421LS2065	SOUVIK DAS	1st	2.00
110	421LS2066	AYUSH DAVE	1st	2.00
111	421LS2071	ARCHIT GAUTAM JAMBHULE	1st	2.00
112	421LS2072	SOURIMA KUNDU	1st	2.00
113	421LS2073	AKASH SINGH KUSHWAHA	1st	2.00
114	421LS2075	SIDDHARTH MAURYA	1st	2.00
115	421LS2076	TANAY DINESH MESHRAM	1st	2.00
116	421LS2079	AKASHJYOTI PATHAK	1st	2.00
117	421LS2080	BHASHKAR PAUL	1st	2.00
118	421LS2082	PREM SINGH RANA	1st	2.00
119	421LS2083	RASHMI RANI	1st	2.00
120	421LS2172	PRIYANKA PATRA	1st	2.00
121	421LS2202	PRIYANKA KUMARI	1st	2.00

122	421MA2088	ANUPAM BHUNIA	1st	2.56
123	421MA2098	RICK MAHANTY	1st	2.00
124	421MA2108	SANCHITA SATPATHY	1st	2.00
125	421MA2177	HIMASISH GHOSAL	1st	2.00
126	421PH2114	BANLAM KUPAR CHALLAM	1st	5.50
127	421PH2115	PRIYANSHU CHAURASIYA	1st	2.70
128	421PH2118	SUBHADIP GHARA	1st	2.50
129	421PH2121	MOHESWAR HEMBRAM	1st	5.30
130	421PH2123	SUBHASIS JENA	1st	2.50
131	421PH2126	SHIVAM MAHARAJ	1st	5.70
132	421PH2129	AMAN SAGAR	1st	2.60
133	421PH2137	SHYAM LAL GURJAR	1st	2.50
134	421PH2184	SANTHOSH K	1st	2.50
135	421PH2186	VIKAS KUMAR	1st	5.30
136	421PH2205	GAURAV SINGH	1st	4.60
137	921CY5003	CHINAM DWARIKANATH PATRA	1st	3.50
138	921EC5002	ATUL KUMAR TIWARI	1st	2.00
139	921EE5002	ABINASH MOHAPATRA	1st	5.38
140	921SM5007	LOKESH KUMAR	1st	2.00
141	920ME5005	PAWAN KUMAR	2nd	5.80
142	118BT0819	HASAN ABDUL KALIM ANSARI	3rd	4.98
143	119EE0649	NIRMIT RAJ	3rd	5.46
144	119FP0903	VEMU BHUVANESH GOUD	3rd	5.86
145	119ME0933	VELUVARTI VENKATA SAI SRINIVASA TEJA	3rd	5.67
146	120AR0020	SHUBHAM WARKADE	3rd	4.90
147	120CS0184	SRUTI BAIBHAB MISHRA	3rd	5.56
148	120EE0682	SHOUHAM B BANERJEE	3rd	5.62
149	120ME0284	ADITYA JAGADALA	3rd	5.88
150	120ME0346	KALLAPALLI SRI CHARAN	3rd	5.91
151	218BM1274	MEGHA SAMANTA	3rd	4.85
152	219EE6224	AKSHAY MURMU	3rd	4.94
153	220CE2059	RAMIL BHATIA	3rd	5.38

154	220CE2219	ANDHOJU ANANDA CHARY	3rd	5.44
155	220EC2067	DHANAVATH VISHNU	3rd	5.42
156	220EC2611	MADDURI SHASHIDHAR	3rd	5.53
157	220EC3536	JAY PRAKASH YADAV	3rd	5.09
158	220EC5556	SACHHIDANANDA SAHU	3rd	5.81
159	220EE1284	PATRICK AJOY JOSEPH	3rd	5.41
160	220EE1290	RAJNISH GAURI SHENDRE	3rd	4.95
161	220EE1474	NIRAJ KUMAR	3rd	5.81
162	220EE1503	AMIT SHARMA	3rd	5.84
163	220EE6125	NISHA MURMU	3rd	5.25
164	220EE6655	SACHIN KUMAR SINGH	3rd	4.70
165	220MN1487	VIRENDRA PAL	3rd	4.72
166	220MN1502	BUKKA VIVEK	3rd	5.33
167	420AS2117	SARFARAJ MIAN	3rd	4.88
168	420HS1028	GAURAV PRASAD	3rd	5.43
169	420PH5078	PURUSHOTAM KUMAR	3rd	5.75
170	920EC5001	ARIK JHA	3rd	2.55
171	920EC5007	BALA KRISHNA MATTADI	3rd	4.34
172	920EE5001	DEVASIS PRADHAN	3rd	3.85
173	920MN5001	PAVAN KUMAR KOLLIPAKA	3rd	2.00
174	920MN5002	PUSHPENDRA PATEL	3rd	5.58
175	920MN5003	VINODH KUMAR N R	3rd	2.00
176	920MN5013	GURUBALASUBRAMANIAM A	3rd	2.00
177	920MN5018	D LALIT KUMAR	3rd	2.00
178	119CR0840	DHIRAJ NAG	4th	5.68
179	119CS0541	CHRISPIN CHARLES MWAKALINGA	4th	5.88
180	919CS5015	SUSHANT KUMAR	4th	5.93
181	919EE5040	DILLIP KUMAR MAHARANA	4th	4.62
182	919EE5042	JAYA NIDHI VASHISHTHA	4th	4.92
183	919ME5056	ASIM MANIR HORO	4th	4.57
184	919ME5057	CHADALAVADA DANIEL ADWITEEYA	4th	2.40
185	919ME5065	MANISH KUMAR	4th	2.43

186	919ME5067	NISHIKANT KUMAR	4th	3.31
187	919ME5072	SHASHWAT SETH	4th	3.19
188	919MN5087	DEBASHIS RAO	4th	5.74
189	117BM0019	SUBRATA SARKAR	5th	5.43
190	119BT0441	PRINCE YADAV	5th	5.37
191	119BT0812	PRASHANT KUMAR	5th	5.66
192	117CS0224	MUKTI MANDAVI	6th	5.52
193	115ME0052	DILIP SHRESTHA	8th	5.97

राष्ट्रीय प्रौद्योगिकी संस्थान राउरकेला
NATIONAL INSTITUTE OF TECHNOLOGY ROURKELA

CGPA < 6.00 IN 2 CONSECUTIVE SEMESTERS (2021-22 : AUTUMN) 24-Dec-2021

NOTE : Student has to go in to SLOWPACE as the current CGPA is < 6.00 in 2 Consecutive Semesters.

#	RollNo	Student Name	1st Sem	2nd Sem	3rd Sem	4th Sem	5th Sem	6th Sem	7th Sem	8th Sem	9th Sem	10th Sem
1	120FP0987	MD KAUSAR ANSARI		5.69	5.82							
2	220CS3257	VIDYA SAGAR		5.90	4.44							
3	720MM1045	AKASH DEEP	5.50	5.89								
4	119CR0090	SOUMYARANJAN BHARATI		5.80	5.78							
5	119EC0603	ARINDAM SAMANTA			5.20	4.64						
6	219CH3343	RISHIRAJ P MONI			5.56	5.77						
7	219EC3362	AKASH GUPTA			5.81	5.58						
8	219EC5493	MIDIDODDI SHIVA SAI			5.47	5.26						
9	219EE4297	GAURAV SINGH			5.89	5.65						
10	219EE6390	BANDARU YOGESWARA RAO			5.79	5.56						
11	219EE6391	KURMANA SAI SONTOSH			5.40	5.20						
12	219EE6544	SOORAJ PRAKASH SAHU			4.90	4.73						
13	419CY5047	PANCHANAN PANIGRAHI				5.80	5.92					
14	419HS1003	ANKIT KUMAR			5.67	4.91						
15	418AG2014	SATISH KUMAR PANIGRAHI		5.76	5.04							
16	117EC0314	KULENTHIRAN PAVITHRAN				5.21	4.33					
17	114CS0094	DEBANANDA BEHERA							5.89	5.73		

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NATIONAL INSTITUTE OF TECHNOLOGY ROURKELA

CGPA < 6.00 IN 3 CONSECUTIVE SEMESTERS (2021-22 : AUTUMN) 24-Dec-2021

NOTE : Student has to go in to SLOWPACE as the current CGPA is < 6.00 in 3 Consecutive Semesters.

#	RollNo	Student Name	1st Sem	2nd Sem	3rd Sem	4th Sem	5th Sem	6th Sem	7th Sem	8th Sem	9th Sem	10th Sem
1	120BM0810	VINAY YADAV	5.57	5.96	5.76							
2	120CH0103	SWASTIK MARDI	5.68	5.78	5.37							
3	120FP0986	SOMNATH	5.96	5.93	5.55							
4	220EC3527	RAJNI	5.84	5.65	5.72							
5	719MM1041	AMAN GOURAV SETHI	5.39	5.09	5.53							
6	419MA2144	RAKESH KUMAR	4.67	5.00	4.30							

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NATIONAL INSTITUTE OF TECHNOLOGY ROURKELA

| | CGPA < 6.00 IN 4 CONSECUTIVE SEMESTERS (2021-22 : AUTUMN) | | 24-Dec-2021 |

NOTE : Student has to leave the Institute as the current CGPA is < 6.00 in 4 Consecutive Semesters.

#	RollNo	Student Name	1st Sem	2nd Sem	3rd Sem	4th Sem	5th Sem	6th Sem	7th Sem	8th Sem	9th Sem	10th Sem
1	119AR0002	REDDY SIDHU VINAY		5.68	5.74	5.24	5.04					
2	119BT0439	ANKIT PRUSTY		5.64	5.36	4.73	4.69					
3	119CE0034	DEVANSHI MAHANANDA		5.48	5.81	5.94	5.99					
4	719CR2008	PRINCE RAJ	3.30	4.75	5.47	5.62						

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NATIONAL INSTITUTE OF TECHNOLOGY ROURKELA

| | CGPA < 5.00 / 5.50 (FOR PG STUDENTS) AFTER 1ST YEAR (2021-22 : AUTUMN) | | 24-Dec-2021 |

NOTE : Student has to leave the Institute as the current CGPA is < 5.00 / 5.50 (for PG and Research) after 1st year.

#	RollNo	Student Name	Semester	CGPA
1	219ME2563	PYLA SASANK	1st	1.37
2	219ME5407	SHARE ZAMAN	1st	4.05
3	219ME5574	UJJWAL KUMAR	1st	3.00
4	220BM1002	KANHU CHARAN KHADANGA	1st	2.00
5	220CE3157	BULUSU SAI SRAVAN KUMAR	1st	2.32
6	220CR2249	MUCHINTHALA RADHAKRISHNA	1st	2.00
7	220CS2261	SAMIR KUMAR SINHA	1st	2.00
8	220CS2607	SUYASH MUSALGAONKAR	1st	3.42
9	220CS3187	ASHIM GULERIA	1st	2.00
10	220CS3269	SHIVAM DALMIA	1st	2.00
11	220CS3270	GUDURI ACHYUTH KUMAR	1st	2.00
12	220EC2514	UBAID RAHMAN KK	1st	2.00
13	220EC3069	SANDEEP KUMAR	1st	2.42
14	220EC3530	NEHA KERKETTA	1st	2.00
15	220EC3535	VIGHNESH SINGH	1st	2.32
16	220EC6571	SAYYEDHUSSAIN SIDDIQUI	1st	2.32
17	220EE1291	PUJA SINGH	1st	2.00
18	220EE3121	RAJU DALAI	1st	2.00
19	220EE4323	BILLA RAKESH	1st	3.37
20	220EE6327	VIVEK SINGH	1st	2.00
21	220ID1363	ANKIT KUMAR	1st	3.84
22	220ID1368	SAJAL PRUSTY	1st	3.84
23	220ID1640	SAURABH BHAGWAN DHAKARE	1st	3.68
24	221BM1005	MEGHANT PRASAD CHOWDHARY	1st	2.00
25	221BM1010	S JEROM VISHAL	1st	2.00

26	221BM1157	ROUTU VENKATA CHIRANJEEVI	1st	2,00
27	221BM1163	ARJOON R S	1st	2,00
28	221BM1165	PUJA SINGH	1st	2,00
29	221BM2021	RAKESH V R	1st	3,00
30	221CE1032	BISWAJYOTI GHOSH	1st	2,00
31	221CE1033	AVINASH PRASAD	1st	2,00
32	221CE1035	ASHUTOSH SAHOO	1st	2,00
33	221CE1178	PRADUM KUMAR GUPTA	1st	2,00
34	221CE1186	MAYANK VERMA	1st	2,00
35	221CE2194	VINEET KUMAR	1st	2,00
36	221CE2204	SUBHAJEET SIKDAR	1st	2,47
37	221CE4579	SUBHAJIT MONDAL	1st	2,00
38	221CH1055	ABHISHEK KUMAR	1st	2,95
39	221CH1243	SHIVANI	1st	2,95
40	221CH3249	AGNIV MONDAL	1st	2,95
41	221CH3257	VIKRANT SHISHODIA	1st	2,95
42	221CS1274	RAJESH PAUL	1st	2,89
43	221CS2299	PURUSHOTTAM TRIVEDI	1st	2,00
44	221CS2610	SANTOSH KUMAR BEHERA	1st	2,00
45	221CS3305	PRIYANSHU KUMAR CHAUDHARY	1st	2,00
46	221CS3308	ABHAY GARG	1st	2,00
47	221EC2341	BHUKYA SUSHMA DEEPTHI RATHOD	1st	2,53
48	221EC2344	ADARSH VERMA	1st	2,74
49	221EC2555	ATHIRASREE C A	1st	3,11
50	221EC3144	PILLA GANGADHAR	1st	2,89
51	221EC3145	S M LAKSHMI SARVANI GUNTUBOYINA	1st	2,00
52	221EC5380	UMMADISETTY TEJASWINI	1st	2,74
53	221EC6387	RAJ KUMAR EKKA	1st	2,00
54	221EC6392	RAHUL PANDEY	1st	2,00
55	221EC6398	SURAJ SHAW	1st	2,00
56	221EC6606	ABISHEK GOURAVE	1st	2,00
57	221EE1409	SREERANJINI A	1st	2,00

58	221EE1416	SAURABH KUMAR	1st	2,00
59	221EE3421	BHARGAV S AMMU	1st	2,00
60	221EE3427	PANKAJ KUMAR	1st	5,26
61	221EE3607	SAIJASI CHAUBEY	1st	2,00
62	221EE3608	NAVYA PRAGATHI MOLUGARAM	1st	2,00
63	221EE4080	NIKITA KUMARI	1st	2,00
64	221EE4082	CHETAN SINGH RAWAT	1st	2,00
65	221EE4084	MAAN SINGH	1st	2,00
66	221EE6085	SHUBHANSHU	1st	4,53
67	221EE6088	ARINDAM MONDAL	1st	2,00
68	221EE6451	RAVI	1st	4,68
69	221EE6467	MD SHARFUDDIN	1st	2,00
70	221FP1473	THATIPARTHI BOBBY REDDY	1st	2,00
71	221ID1486	MANIMARAN S	1st	2,00
72	221ME1502	SOUVIK MONDAL	1st	2,47
73	221ME2516	RAJESH PARSHURAM MADARI	1st	2,00
74	221ME3122	GOUTHU NIREEKSHANA RAO	1st	2,53
75	221ME3535	RITISH ROUT	1st	2,32
76	221ME5126	ANANT VINAYAK MAGAR	1st	2,32
77	221ME5128	ABHINAV PAL	1st	2,74
78	221ME5599	ALIND DWIVEDI	1st	2,63
79	221MM1130	ABHINAV AKASH	1st	2,00
80	221MM1132	AVINASH KUMAR CHATURVEDI	1st	2,00
81	221MM1549	ABHIJITH C R	1st	2,00
82	221MM1600	YUGESH KUMAR DAS	1st	2,00
83	221MN1137	POTHIREDDYGARI MURALIDHAR REDDY	1st	2,00
84	321SM1019	SILVIYA JENA	1st	2,65
85	420HS1015	DEBARATI ROY	1st	2,63
86	420LS2042	ROHINI BHATT	1st	2,00
87	420PH2065	UTKARSH SINHA	1st	2,60
88	420PH2120	SHREYA DEBNATH	1st	2,60
89	421AG2145	HARSHIT SINHA	1st	3,50

90	421HS1008	RAJA BARMAN	1st	3,16
91	421HS1009	SUBRATA SARMAH BARUAH	1st	3,05
92	421HS1011	NEELESH CHAURASIYA	1st	3,05
93	421HS1016	ANAMIKA K H	1st	3,16
94	421HS1021	PRANJALI PRAVIN PADOLE	1st	2,53
95	421HS1030	ABHISHEK YADAV	1st	3,26
96	421LS2065	SOUVIK DAS	1st	2,00
97	421LS2066	AYUSH DAVE	1st	2,00
98	421LS2071	ARCHIT GAUTAM JAMBHULE	1st	2,00
99	421LS2072	SOURIMA KUNDU	1st	2,00
100	421LS2073	AKASH SINGH KUSHWAHA	1st	2,00
101	421LS2075	SIDDHARTH MAURYA	1st	2,00
102	421LS2076	TANAY DINESH MESHRAM	1st	2,00
103	421LS2079	AKASHJYOTI PATHAK	1st	2,00
104	421LS2080	BHASHKAR PAUL	1st	2,00
105	421LS2082	PREM SINGH RANA	1st	2,00
106	421LS2083	RASHMI RANI	1st	2,00
107	421LS2172	PRIYANKA PATRA	1st	2,00
108	421LS2202	PRIYANKA KUMARI	1st	2,00
109	421MA2088	ANUPAM BHUNIA	1st	2,56
110	421MA2098	RICK MAHANTY	1st	2,00
111	421MA2108	SANCHITA SATPATHY	1st	2,00
112	421MA2177	HIMASISH GHOSAL	1st	2,00
113	421PH2115	PRIYANSHU CHAURASIYA	1st	2,70
114	421PH2118	SUBHADIP GHARA	1st	2,50
115	421PH2121	MOHESWAR HEMBRAM	1st	5,30
116	421PH2123	SUBHASIS JENA	1st	2,50
117	421PH2129	AMAN SAGAR	1st	2,60
118	421PH2137	SHYAM LAL GURJAR	1st	2,50
119	421PH2184	SANTHOSH K	1st	2,50
120	421PH2186	VIKAS KUMAR	1st	5,30
121	421PH2205	GAURAV SINGH	1st	4,60

122	919SM5102	YOGESH KUMAR DALMIA	2nd	2,00
123	920CE5008	ATULYA KUMAR	2nd	2,00
124	920CR5005	KUSHAL AGARWAL	2nd	2,00
125	920CR5006	KHODIDAS GOVINDBHAI KUNDARIYA	2nd	3,50
126	920CS5014	SRIVENKATA LAXMINARASIMHARAO GULIMI	2nd	3,00
127	920EE5007	CHINMAYA KUMAR RATH	2nd	2,00
128	920ME5003	ABHAY KUMAR	2nd	2,00
129	920ME5004	DEELIP KUMAR RAUTRAY	2nd	2,00
130	920ME5006	KRUSHNA SHANKAR SETHI	2nd	4,83
131	920MN5005	SUVAM MISHRA	2nd	2,00
132	920MN5008	SWAPNA SARIT NAYAK	2nd	3,00
133	920MN5020	RAJAT KUMAR SAHU	2nd	2,00
134	218BM1274	MEGHA SAMANTA	3rd	4,85
135	219EE6224	AKSHAY MURMU	3rd	4,94
136	220CE2059	RAMIL BHATIA	3rd	5,38
137	220CE2219	ANDHOJU ANANDA CHARY	3rd	5,44
138	220CS3257	VIDYA SAGAR	3rd	4,44
139	220EC2067	DHANAVATH VISHNU	3rd	5,42
140	220EC3536	JAY PRAKASH YADAV	3rd	5,09
141	220EE1284	PATRICK AJOY JOSEPH	3rd	5,41
142	220EE1290	RAJNISH GAURI SHENDRE	3rd	4,95
143	220EE6125	NISHA MURMU	3rd	5,25
144	220EE6655	SACHIN KUMAR SINGH	3rd	4,70
145	220MN1487	VIRENDRA PAL	3rd	4,72
146	220MN1502	BUKKA VIVEK	3rd	5,33
147	418AG2014	SATISH KUMAR PANIGRAHI	3rd	5,04
148	419MA2144	RAKESH KUMAR	3rd	4,30
149	420AS2117	SARFARAJ MIAN	3rd	4,88
150	420HS1028	GAURAV PRASAD	3rd	5,43
151	219EC5493	MIDIDODDI SHIVA SAI	4th	5,26
152	219EE6391	KURMANA SAI SONTOSH	4th	5,20
153	219EE6544	SOORAJ PRAKASH SAHU	4th	4,73

| 154 | 419HS1003 | ANKIT KUMAR | | 4th | 4.91 |

NOTE : Student has to REPEAT 1st year as the current CGPA Is between 5.00 and 5.70 after 1st year.

#	RollNo	Student Name	Semester	CGPA
1	420LS5075	NIKHIL KUMAR	2nd	5.24
2	920CH5004	POOJA CHANDRAKAR	2nd	5.60
3	920EC5013	SWETHA AMIT	2nd	5.00

राष्ट्रीय प्रौद्योगिकी संस्थान राउरकेला
NATIONAL INSTITUTE OF TECHNOLOGY ROURKELA

CGPA < 4.00 AFTER 1ST SEMESTER (2021-22 : AUTUMN)	24-Dec-2021

NOTE : Student has to leave the Institute as the CGPA is < 4.00 after 1st semester.

#	RollNo	Student Name	Semester	CGPA
1	120BT0821	ARYAN ANURAG TIBREWALA	1st	2.73
2	120BT1118	ELIAS ENEYEW KASSIE	1st	2.00
3	120EI0889	ANNAS FURQUAN PASHA	1st	2.17
4	219ME2563	PYLA SASANK	1st	1.37
5	219ME5574	UJJWAL KUMAR	1st	3.00
6	220BM1002	KANHU CHARAN KHADANGA	1st	2.00
7	220CE3157	BULUSU SAI SRAVAN KUMAR	1st	2.32
8	220CR2249	MUCHINTHALA RADHAKRISHNA	1st	2.00
9	220CS2261	SAMIR KUMAR SINHA	1st	2.00
10	220CS2607	SUYASH MUSALGAONKAR	1st	3.42
11	220CS3187	ASHIM GULERIA	1st	2.00
12	220CS3269	SHIVAM DALMIA	1st	2.00
13	220CS3270	GUDURI ACHYUTH KUMAR	1st	2.00
14	220EC2514	UBAID RAHMAN KK	1st	2.00
15	220EC3069	SANDEEP KUMAR	1st	2.42
16	220EC3530	NEHA KERKETTA	1st	2.00
17	220EC3535	VIGHNESH SINGH	1st	2.32
18	220EC6571	SAYYEDHUSSAIN SIDDIQUI	1st	2.32
19	220EE1291	PUJA SINGH	1st	2.00
20	220EE3121	RAJU DALAI	1st	2.00
21	220EE4323	BILLA RAKESH	1st	3.37
22	220EE6327	VIVEK SINGH	1st	2.00
23	220ID1363	ANKIT KUMAR	1st	3.84
24	220ID1368	SAJAL PRUSTY	1st	3.84
25	220ID1640	SAURABH BHAGWAN DHAKARE	1st	3.68

26	221BM1005	MEGHANT PRASAD CHOWDHARY	1st	2.00
27	221BM1010	S JEROM VISHAL	1st	2.00
28	221BM1157	ROUTU VENKATA CHIRANJEEVI	1st	2.00
29	221BM1163	ARJOON R S	1st	2.00
30	221BM1165	PUJA SINGH	1st	2.00
31	221BM2021	RAKESH V R	1st	3.00
32	221CE1032	BISWAJYOTI GHOSH	1st	2.00
33	221CE1033	AVINASH PRASAD	1st	2.00
34	221CE1035	ASHUTOSH SAHOO	1st	2.00
35	221CE1178	PRADUM KUMAR GUPTA	1st	2.00
36	221CE1186	MAYANK VERMA	1st	2.00
37	221CE2194	VINEET KUMAR	1st	2.00
38	221CE2204	SUBHAJEET SIKDAR	1st	2.47
39	221CE4579	SUBHAJIT MONDAL	1st	2.00
40	221CH1055	ABHISHEK KUMAR	1st	2.95
41	221CH1243	SHIVANI	1st	2.95
42	221CH3249	AGNIV MONDAL	1st	2.95
43	221CH3257	VIKRANT SHISHODIA	1st	2.95
44	221CS1274	RAJESH PAUL	1st	2.89
45	221CS2299	PURUSHOTTAM TRIVEDI	1st	2.00
46	221CS2610	SANTOSH KUMAR BEHERA	1st	2.00
47	221CS3305	PRIYANSHU KUMAR CHAUDHARY	1st	2.00
48	221CS3308	ABHAY GARG	1st	2.00
49	221EC2341	BHUKYA SUSHMA DEEPTHI RATHOD	1st	2.53
50	221EC2344	ADARSH VERMA	1st	2.74
51	221EC2555	ATHIRASREE C A	1st	3.11
52	221EC3144	PILLA GANGADHAR	1st	2.89
53	221EC3145	S M LAKSHMI SARVANI GUNTUBOYINA	1st	2.00
54	221EC5380	UMMADISETTY TEJASWINI	1st	2.74
55	221EC6387	RAJ KUMAR EKKA	1st	2.00
56	221EC6392	RAHUL PANDEY	1st	2.00
57	221EC6398	SURAJ SHAW	1st	2.00

58	221EC6606	ABISHEK GOURAVE	1st	2.00
59	221EE1409	SREERANJINI A	1st	2.00
60	221EE1416	SAURABH KUMAR	1st	2.00
61	221EE3421	BHARGAV S AMMU	1st	2.00
62	221EE3607	SAIJASI CHAUBEY	1st	2.00
63	221EE3608	NAVYA PRAGATHI MOLUGARAM	1st	2.00
64	221EE4080	NIKITA KUMARI	1st	2.00
65	221EE4082	CHETAN SINGH RAWAT	1st	2.00
66	221EE4084	MAAN SINGH	1st	2.00
67	221EE6088	ARINDAM MONDAL	1st	2.00
68	221EE6467	MD SHARFUDDIN	1st	2.00
69	221FP1473	THATIPARTHI BOBBY REDDY	1st	2.00
70	221ID1486	MANIMARAN S	1st	2.00
71	221ME1502	SOUVIK MONDAL	1st	2.47
72	221ME2516	RAJESH PARSHURAM MADARI	1st	2.00
73	221ME3122	GOUTHU NIREEKSHANA RAO	1st	2.53
74	221ME3535	RITISH ROUT	1st	2.32
75	221ME5126	ANANT VINAYAK MAGAR	1st	2.32
76	221ME5128	ABHINAV PAL	1st	2.74
77	221ME5599	ALIND DWIVEDI	1st	2.63
78	221MM1130	ABHINAV AKASH	1st	2.00
79	221MM1132	AVINASH KUMAR CHATURVEDI	1st	2.00
80	221MM1549	ABHIJITH C R	1st	2.00
81	221MM1600	YUGESH KUMAR DAS	1st	2.00
82	221MN1137	POTHIREDDYGARI MURALIDHAR REDDY	1st	2.00
83	321SM1019	SILVIYA JENA	1st	2.65
84	420CY5045	HEENA PRIYADARSHINI AMAT	1st	2.18
85	420HS1015	DEBARATI ROY	1st	2.63
86	420LS2042	ROHINI BHATT	1st	2.00
87	420LS5085	PRITINANDA PANDA	1st	2.18
88	420PH2065	UTKARSH SINHA	1st	2.60
89	420PH2120	SHREYA DEBNATH	1st	2.60

90	421AG2145	HARSHIT SINHA	1st	3.50
91	421HS1008	RAJA BARMAN	1st	3.16
92	421HS1009	SUBRATA SARMAH BARUAH	1st	3.05
93	421HS1011	NEELESH CHAURASIYA	1st	3.05
94	421HS1016	ANAMIKA K H	1st	3.16
95	421HS1021	PRANJALI PRAVIN PADOLE	1st	2.53
96	421HS1030	ABHISHEK YADAV	1st	3.26
97	421LS2065	SOUVIK DAS	1st	2.00
98	421LS2066	AYUSH DAVE	1st	2.00
99	421LS2071	ARCHIT GAUTAM JAMBHULE	1st	2.00
100	421LS2072	SOURIMA KUNDU	1st	2.00
101	421LS2073	AKASH SINGH KUSHWAHA	1st	2.00
102	421LS2075	SIDDHARTH MAURYA	1st	2.00
103	421LS2076	TANAY DINESH MESHRAM	1st	2.00
104	421LS2079	AKASHJYOTI PATHAK	1st	2.00
105	421LS2080	BHASHKAR PAUL	1st	2.00
106	421LS2082	PREM SINGH RANA	1st	2.00
107	421LS2083	RASHMI RANI	1st	2.00
108	421LS2172	PRIYANKA PATRA	1st	2.00
109	421LS2202	PRIYANKA KUMARI	1st	2.00
110	421MA2088	ANUPAM BHUNIA	1st	2.56
111	421MA2098	RICK MAHANTY	1st	2.00
112	421MA2108	SANCHITA SATPATHY	1st	2.00
113	421MA2177	HIMASISH GHOSAL	1st	2.00
114	421PH2115	PRIYANSHU CHAURASIYA	1st	2.70
115	421PH2118	SUBHADIP GHARA	1st	2.50
116	421PH2123	SUBHASIS JENA	1st	2.50
117	421PH2129	AMAN SAGAR	1st	2.60
118	421PH2137	SHYAM LAL GURJAR	1st	2.50
119	421PH2184	SANTHOSH K	1st	2.50
120	520BM3009	SWAYAMBARA MISHRA	1st	2.00
121	520LS2010	SOMNATH MONDAL	1st	2.64

122	521FP1006	LOKESWARI RAMIREDDDY	1st	2.00
123	521LS6010	SOUMYASHREE BHOI	1st	2.00
124	521MA6010	AMAR PAL VERMA	1st	3.00
125	521MM1001	ALOK KUMAR TRIVEDI	1st	2.00
126	521MN1004	BHAWESH PRASAD TIRUWA	1st	2.00
127	921CY5003	CHINAM DWARIKANATH PATRA	1st	3.50
128	921EC5002	ATUL KUMAR TIWARI	1st	2.00
129	921SM5007	LOKESH KUMAR	1st	2.00

CGPA < 6.00 AFTER CGPA < 6.00 IN 3 CONSECUTIVE SEMESTERS (2021-22 : AUTUMN)			24-Dec-2021	

NOTE : Student has to leave the Institute as the current CGPA is < 6.00 after CGPA was < 6.00 in previous 3 consecutive semesters.

#	RollNo	Student Name	Semester	CGPA
1	119CR0090	SOUMYARANJAN BHARATI	3rd	5.78
2	419MA2144	RAKESH KUMAR	3rd	4.30
3	919ME5057	CHADALAVADA DANIEL ADWITEEYA	4th	2.40
4	919ME5065	MANISH KUMAR	4th	2.43
5	919ME5072	SHASHWAT SETH	4th	3.19
6	119BT0439	ANKIT PRUSTY	5th	4.69

APPLICATION

Annexure – A4

To,

Dean Academic,

NIT Rourkela, Rourkela,

Odisha.

Subject : Re-admission of My ward in 1st Semester UG.

Through : Faculty Advisor

Sir,

I am Father of, <u>Purushottam kumar</u>, 2nd Year UG student in your Institute. My ward has got 6·93 CGPA in his first year of UG course. His studies were hampered by conditions due to covid-19 and related Issues. He wants to perform better and hence wants to be in 1st Year. I have acknowledge his wish and wants that he should Remain in first Year of His UG course. So I request you to allow him to appear in the 1st Year class to study.

For this I shall be highly obiliged to you. His ID No. is <u>420PH5078</u>. Enrollment Year 2020.

{ Yours Thankful ~~Sivanam~~

Recommended to repeat 1st year
Sasmita Mishra
(FAC. ADV.)

Date 18·11·2021

Roja Devi
signature parent

Raj kumar
Signature Parent

<u>Director</u>
There does not exist any regulation for this case. It may be considered as per your suggestion since it was requested by his parents. — 82 —
S.Mishra
01/12/21
{-T.O

If there is rule of
If this rule of
gilency it may
be put up

4R- 1.12.21.
Dean (Aca)

Director

Since the 1st Yr classes will commence from 6th Dec & the student
registration after result may lead to attendance shortage and other
complication. I request you to kindly allow him to register the
courses. May be approved as special case.

S. Mishra 01/12/21

As noted by the
Dean (Aca) above
may to case subject general
special approval not general
to approval

4R- 1.12.21
Dean (Aca)

Fwd: Appeal of Prtha Sarathi Majhi
1 message

FTS/5116S

Annexure – A5

Krishna Pramanik <kpr@nitrkl.ac.in>
To: parthasarathimajhi@gmail.com

Fri, Dec 3, 2021 at 4:18 AM
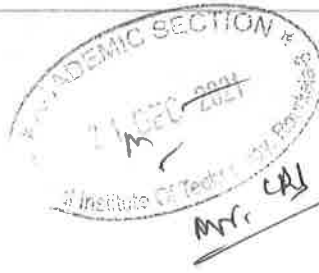
----- Forwarded Message -----
From: "Krishna Pramanik" <kpr@nitrkl.ac.in>
To: "partha wbut" <partha.wbut@gmail.com>
Sent: Friday, December 3, 2021 5:47:14 PM
Subject: Fwd: Appeal of Prtha Sarathi Majhi

----- Forwarded Message -----
From: "Krishna Pramanik" <kpr@nitrkl.ac.in>
To: "parthasarathi majhi" <510bm604@nitrkl.ac.in>
Sent: Friday, December 3, 2021 5:29:15 PM
Subject: Fwd: Appeal of Prtha Sarathi Majhi

Dear Mr. Partha Sarathi Majhi
Please refer to the forwarded message regarding your application for extension of thesis submission. You are advised
to prepare and submit a road map of your thesis work as early as possible.
Best wishes

----- Forwarded Message -----
From: "DEAN-AC DEAN(AC)" <dean-ac@nitrkl.ac.in>
To: "krishna pramanik" <kpr@nitrkl.ac.in>
Sent: Tuesday, November 30, 2021 5:02:55 PM
Subject: Appeal of Prtha Sarathi Majhi

Dear Madam,

The student Mr. Partha sarathi Majhi under your supervision has already completed 8 years after PhD enrollment on
19th Aug'2010. He was further allowed till 18th Aug'2018 and again extended till 30th June'2021. However he has
appealed for further extension for consecutive three semesters. You are requested to forward his application through
DRC. The student should propose with his road map so that he must be sure about executing his thesis work within
the said period. The matter was not taken up in this senate as it was not routed through proper channel and was
accordingly intimated to you telephonically. Kindly look into the matter and respond

regards
Dean(Academic)
National Institute of Technology, ROURKELA
Tel: +91-661-2462011

DRc chairman,
A DSC meeting was held on 16/12/2021 for this matter. After scrutinizing
the report and roadmap (Time line) DSC recommended for the
extension of 3 semester (Till December 2022) considering the
Pandemic as well as health issue of the student.

Pramanik
16/12/2021

16/12/21

..12/21

Braddhu
14/12/21

16/12/21

Dean (AC).

As per DSC's recommendation, extension may be given till December 2022.

Chujin
17/12/2021.

PMahesh
17/12/21

BP Nayak
17/12/2021

MGBal
17/12/21

(Chairman, DRC & HOD-BM)

Mirza Khalid Beg
17/12/2021

Patra
17/12/21

Prashant
17-12-2021

DSC meeting regarding review of progress and recommendation tenure extension of Ph.D. tenure of Partha sarathi Maji

From : Krishna Pramanik <kpr@nitrkl.ac.in>   Wed, Dec 15, 2021 05:33 PM

Subject : DSC meeting regarding review of progress and recommendation tenure extension of Ph.D. tenure of Partha sarathi Maji

To : SK PRATIHAR <skpratihar@nitrkl.ac.in>, Amit Biswas <amitnitbm@gmail.com>, Basudeb Munshi <basudeb@nitrkl.ac.in>

Cc : Subhankar Paul <spaul@nitrkl.ac.in>

```
Dear DSC Members
A DSC meeting will be held for the above mentioned subject.
 The schedule of the meeting has decided in consultation with
the DSC Chairman which is on 16th Dec 2021 at 3pm in the
meeting room of thedepartment of Biotechnology & Medical
Engineering. All are requested to make it convenient to
attend the same.
Regards
Prof. K. Pramanik
```

3D PRINTED FIBROUS SODIUM ALGINATE/SILK FIBROIN BASED SCAFFOLDS FOR BONE TISSUE ENGINEERING

1. INTRODUCTION

Bone fractures are becoming more common as a result of a variety of factors. Tissue engineering is a promising treatment for bone tissue loss, which current strategies are unable to treat effectively or achieve satisfactory clinical outcomes. Scaffolds with the necessary shape, size, physical, chemical, and natural properties for improved performance and regenerating complex bone fractures are always in high demand. Three-dimensional (3D) printing allows for the creation of customised scaffolds that are extremely appealing for bone tissue engineering. Over the last decade, it has become possible to design novel bone tissue scaffolds with modified shape, large scale production, wettability, mechanical strength, and cell reactions. The scaffolds' challenges include sufficient mechanical strength and matching the mechanical properties of the scaffolds to the properties of the bone. The stress shielding phenomenon is exacerbated by a mismatch in elastic modulus. The elastic modulus of human cortical bone ranges from 2 to 16 GPa. The elastic modulus of steel used for biomedical applications is in the 200 GPa range, which encourages stress shielding. Bioabsorbable polymeric materials have unique properties such as matched mechanical strength with natural bone, controlled rate of degradation, and porosity to allow for interconnected neo bone regeneration. When bioactive nano filler materials were added, agglomeration was observed as the concentration of Hydroxyapatite increased. Many technologies, such as freeze drying, 3D printing, and other additive methods, have been recommended to avoid this.

Alginate is a natural polymer that is utilized for tissue engineering scaffolds, mainly for the treatment of bone defects. Alginate, as a polysaccharide, improves the texture of the Extra Cellular Matrix (ECM), causing tissue formation. Alginate has previously often been suitable for 3D printing scaffold fabrication. Furthermore, alginate-based printed 3D scaffolds demonstrated enough stability for bone tissue engineering.

Silk fibroin (SF) is a naturally present protein derived from Bombyx mori that is frequently used in bone tissue engineering scaffolds due to its structural stability in retaining the contour shape during new bone growth. Furthermore, SF contains amino acids that can stimulate the formation of new bone .The structural protein components of the Extra Cellular Matrix(ECM) function similarly to SF.

Due to large-scale cultivation of silkworms for the textile industry, there are abundant and reasonable cost sources for this natural polymer, however, for medical applications proper extraction and preparation of the core protein is required.

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Pantha Sanatha Mashi
16/12/21

1

A systematic literature review of the performance of silk constructions (e.g., vascular grafts, ligaments, and wound dressings for skin grafting) in small and large animal trials found that a variety of Bombyx mori silk constructs worked well across the board. In vivo comparisons of Bombyx mori silk fibroin with commonly used natural (e.g., collagen) and synthetic (e.g., polycaprolactone, polylactic acid, poly[lactide-co-glycolic acid]) biomaterials show that it is typically at least as good as these synthetic materials and often superior to other natural biopolymers.

Polyvinylalcohol (PVA) is a synthetic polymer that is used to control the fabrication of tissue engineering scaffolds. Previous research has shown that PVA is suitable for the fabrication of 3D printed scaffolds with sufficient physical stability for bone tissue engineering. PVA has a unique adhesive function that can interact with the components of the Extra Cellular Matrix (ECM). PVA was chosen to mimic the binding component of ECM in 3D printed scaffolds.

This research aimed to fabricate scaffolds by 3D printing using alginate, PVA, and SF to mimic the components of the ECM. Alginate and PVA were used as the basic materials. Structural formation, morphology, and the biological functions of the fabricated scaffolds were evaluated for bone tissue engineering.

2. LITERATURE SURVEY

Rapid prototyping is a process of making scaffolds from various artificial and natural polymers with the help of computer aided design. The process begins with design of both internal and external micro architecture of the scaffold in software. After completion of the design it is exported to the rapid prototyping machine in '*.stl' format. From the .stl format the machine generate the tool path algorithm for Fabrification of the scaffold from desired material [1, 2]. This is the standard practice in the industry for Fabrification of the different metallic as well as ceramic parts of useful design. Rapid prototyping process involve different technique like Selective Laser Sintering (SLS), 3 dimensional printing (3DP), fused deposition modelling (FDM) for Fabrification of the scaffold [3]. Each technique has its own advantages and disadvantages depending upon the material used. In tissue engineering application rapid prototyping has been used for preparation of scaffold from different biopolymers. Among the various RP technologies fused deposition modelling (FDM) is one of the commercial processes for Fabrification of the scaffold due to its simple design of machine & operating procedure [4]. Normally FDM uses thermoplastic polymer for Fabrification of the scaffold but various composites can also be used .Thermoplastic polymer melts when reach up to certain temperature and extrude through the nozzle in a layer by layer manner over a surface to give a 3 dimensional structure of input design [5]. Nozzle diameter of the machine controls the diameter of the extruded material which in turn affects the overall porosity of the scaffold [6]. Scaffold porosity can be controlled with the help of the changing the various parameters of the machine with the help of software [7]. Scaffold design can be

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done in a particular software or taking the image from the CT/MRI scan to make the design in the CAD environment. ABS was the first material of choice in Fused deposition modelling process due to its easy availability & low cost as a artificial polymer. Apart from ABS other polymers like PCL, PMMA, PLA etc has been used in FDM process of tissue engineering for making of scaffold with various metal composites[8]. FDM process not only involves changing of material composition but also modification of conventional machine design. Modification of machine design involves changing the nozzle diameter & material feed chamber so that optimization of the material extrusion can be done by changing the angle of deposition pattern for different pore size scaffold [9]. FDM use filament type material which is its main drawback for selecting wide range of polymer with complete exclusion of natural polymer. So preparation of filament from various materials is the first step for successful Fabrification of scaffold from a desired material. To overcome this problem investigators have developed some design called PED (precise extrude deposition) so that desired material can be used in the form of pellets [10]. In bone and cartilage tissue engineering FDM process has been applied for Fabrification of scaffold with good visible results of cell growth and proliferation [11]. Many techniques have been developed to fabricate three-dimensional porous architectures to fill this role, such as by particle leaching, phase separation and textile technology. However, scaffolds fabricate by these techniques do not adequately mimic the structure of the natural extracellular matrix in terms of architecture, which may be one of the reasons for suboptimal outcome in generating functional tissues. Therefore, new designs and manufacture technologies are required to improve the function and architecture of scaffolds. Different scaffold fabrication methodologies/techniques utilizing several synthetic and natural polymers, including solvent casting, particulate leaching, gas foaming, phase separation, electro spinning, porogen leaching, fiber mesh, fiber bonding, self assembly, rapid prototyping, melt molding, membrane lamination and freeze drying. Rapid prototyping (RP) RP is also called as solid free-form technique. This technique is more advanced technique for scaffold fabrication. It is computer controlled fabrication technique. It can rapidly produce 3D object by using layer manufacturing method. RP technique generally comprises the design of scaffold model by using the computer aided design (CAD) software, which is then expressed as a series of cross section. Corresponding to each cross section RP machine lays down a layer of material starting from the bottom and moving up a layer at a time to create the scaffolds. In typical example, image of bone defect in a patient can be taken and develop 3D CAD computer model. The computer then can reduced the model to slice or layers. The 3D objects are constructed layer by layer by using RP techniques such as fused deposition modeling (FDM), selective laser sintering (SLS), 3D printing (3D-P) or stereo lithography. Now a day RP is an efficient way for generating the scaffolds of desired property, other advantage of this technique is to produce the parts with highly reproducible architecture and compositional variations. RP has advantage over other fabrication techniques, it has ability to control matrix architecture (size, shape, inter connectivity, branching, geometry and orientation) yielding biomimetic structure, that varying in design and material composition. It has ability to control the mechanical property, biological effects and degradation kinetics of scaffolds. RP technique can easily be integrated with the imaging technique to produce the scaffolds that are customized in size and shape allowing the tissue engineered graft to be

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modified for particular applications or for individual patient. One of the main drawbacks of this technique is achieved low resolution by current systems and types of polymeric materials that are used for this technique. So we can summarize important properties of scaffolds are: It should have the excellent surface chemistry to allow attachment, migration, proliferation, and differentiation of the cells. Adequate mechanical properties to maintain the structure and function immediately after implantation and during remodelling of the implants. Compressive strength for neuron is around 1 KPa where as for muscle is around 5-10 kPa.For cartilage 10-30 Kpa and for bone around 30-70 KPa. Interconnected pores with proper pore size to support cell infiltration and vascularisation. Porosity of the bone scaffold should be 70%-90% where as for cartilage tissue it should be near about 90%.For muscle tissue scaffold porosity required must be greater than 70%. For bone pore size should be in the range of 96-151 micrometer and for muscle around 210-292 micrometer. For new blood vessel formation pore size should be around 0.8-8 micrometer. Controlled biodegradability to aid the formation of new tissue. Biocompatibility, to avoid unwanted host tissue responses to the implant. It should support the formation of ECM by promoting cellular functions, and have the ability to provide the bimolecular signals to the cells. Scaffolds used for tissue engineering should mimic in part the structure and biological function of the extracellular matrix.

AIM AND SCOPE OF THE WORK

The aim of the work is to design a 3 dimensional scaffold by 3D printing for bone tissue engineering application.

OBJECTIVES

1. To develop 3D printed alginate/silk fibroin(SF) based composite scaffolds
2. To improvise the properties of alginate/silk fibroin(SF) by blending with other biopolymers.
3. To develop 3D printed SA/SF composites by incorporating hydroxyapatite.
4. To test biocompatibility of thescaffold by in vitro cell study and in vivo animal testing , if possible

Efforts may be given to improve the angiogenesis property of the fabricated scaffolds by adding suitable growth factors

WORK PLAN

1. Fabrication and characterization of alginate/silk fibroin (SF) based composite scaffolds.
2. Enhancement of mechanical and physicochemical properties of alginate/silk fibroin(SF) scaffolds by blending with polyvinyl alcohol(PVA). Biocompatibility assessment by *In-vitro* cell study
3. Fabrication and characterization of alginate/silk fibroin(SF)/hydroxyapatite based composite scaffolds

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4. Biocompatibility assessment of alginate/silk fibroin(SF)/hydroxyapatite based composite scaffolds by in vitro cell study

Efforts may be given to improve the angiogenesis property of the fabricated scaffolds by adding suitable growth factors

Materials & Methods

Preparation of aqueous silk fibroin(SF) solution

Dried Bombyx mori silk cocoons were chopped into small pieces and treated for 20 minutes with a boiling aqueous solution of 0.02M sodium carbonate, stirring constantly. To eliminate the glue-like sericine protein, the whole mass was repeatedly washed with distilled water (Mille-Q water) and dried in a hot air oven. Dissolving 2 gms of degummed silk in 20ml LiBr (9.3M) solution at 70°C for 3 hours yielded 10 wt.% silk fibroin solution. To remove LiBr, the fibroin solution was dialyzed against deionized water in a cellulose membrane based dialysis cassette (molecular cutoff 12,400.) for 3 days, replacing water every 6 hours. After dialysis, the silk fibroin solution was centrifuged for 20 minutes at 5-10 °C at 5000 rpm. The concentrated solutions were kept at 4 °C for future studies.

Preparation of Polymer Blends & Fabrication of scaffold

SF/alginate blends were prepared by mixing the aqueous SF(10 wt.%) and alginate(2 wt.%) solutions. Each solution was mixed with volume ratios of SA to SF to be 9 : 1, 8 : 2, 7 : 3, and 6: 4 and stirred at room temperature for 30 min.

Fabrication of scaffolds

3D printed scaffolds were fabricated from the prepared polymeric blends and composites following layer-by layer approach using rapid prototyping method and cross-linked with aqueous 1.4M $CaCl_2$ solution. Various process parameters such as fill density (FD), layer height, printing speed and nozzle diameter were kept fixed for each blend ratios.

Characterization of Scaffold

Morphological analysis

The morphology of 3D printed scaffolds were examined by using scanning electron microscope (SEM). The average fiber diameter and pore size was calculated by using image J software.

Structural and Functional analysis

X-ray diffraction (XRD) of 3D printed fibrous scaffolds were performed by X-ray Diffractometer (Rigaku Japan/Ultima-IV). X-ray diffraction (XRD) curves were recorded with rate of 10°/min with a step size of 0.02° within a scanning region of $2\theta = 10$–$60°$. The functional groups of the prepared scaffolds were determined using Fourier transforms

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infrared (FTIR) spectroscopic analysis (FTIR, Shimadzu AIM-8800, Japan) operated in the transmittance mode in 4000–400 cm^{-1} region.

Mechanical Testing

Universal testing machine (Instron 3369, Bioplus, USA) was used to determine the tensile strength of the developed 3D printed scaffolds. Tensile testing was performed with a load cell of 1000 N at cross head speed of 5 mm/min

Hydrophilicity Measurement

Static contact angles of the samples were measured using a contact angle measuring instrument, Kruss DSA 25 (Germany). Samples in the form of films were cut into small square shape and drop of distilled water was poured at their surface at room temperature for the measurement of contact angle

Swelling Behaviour Study

Immersion in SBF solution was used to analyze the swelling behaviour of the fabricated scaffolds. The pre-weighed scaffolds were immersed in SBF solution and dried at room temperature temperature. The samples were removed from the SBF solution after a specific time interval and put on filter paper to remove excess SBF prior to getting measured. The swelling percentage of a scaffold was calculated by taking the difference between the final weight and the initial dry weight of the scaffold by the initial dry weight using the formula below.

$$Swelling\ (\%) = \frac{Ws - Wd}{Wd} \times 100$$

Where Ws is the weight after swelling of scaffold and Wd is initial dry weight of scaffold

In-vitro biodegradation study

In a summary, the scaffolds were cut into nearly equal dimensions and immersed in simulated body fluid after their dry weights were recorded. The samples were taken out of the SBF solution every two days and freeze dried to calculate the scaffold's dry weight. The experiment lasted 14 days, with the SBF solution was changed every day. The degradation rate was calculated using the formula for calculating weight loss %.

$$Weight\ loss\ (\%) = \frac{Wb - Wd}{Wb} \times 100\%$$

where Wb is the weight before degradation and Wd is the weight after degradation

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Protein absorption assay

An equal weight of the fabricated scaffolds was immersed into BSA (Bovine Serum Albumin) solution (1mg/ml in 1X PBS). After 24 hours of incubation at 37°C, 30μl BSA solution was taken from the sample and 1.5ml Bradford reagent was added. The optical density (OD) was measured using UV-vis spectroscopy at 595nm where BSA solution with Broadford reagent was acted as control. The standard plot was prepared by taking absorbance of different concentration of the BSA solution. The OD values were plotted against the standard plot of BSA to obtain the total protein absorption over the surface of the scaffold

In-vitro biomineralization study

The in-vitro biomineralization study of the scaffolds was performed in SBF (simulated body fluid) solution. SBF solution was prepared by the standard protocol. The dry scaffolds were immersed in SBF solution and incubated at 37°C for a particular time period by changing the SBF after every 2 days. After the incubation, the scaffolds were thoroughly washed to remove the extra deposited salt and then dried. The apatite layer formed over the scaffold was characterized by SEM and XRD.

In-vitro cell study

Morphology, cell attachment and cell spreading

Cell attachment and cell morphology of the cultured cells on the scaffold will be assessed by E-SEM or FESEM study. For FESEM study, the cultured cell-seeded scaffolds are fixed with 2.5% glutaraldehyde for 20 min and dehydrated consecutively for 5 min using gradient ethanol concentrations (30%, 50%, 70%, 90% and 100% (v/v) in water). After drying at room temperature, the scaffolds are sputter coated with gold and observed under FESEM

Cell viability by MTT assay

The metabolic activity of cells cultured on the scaffolds will be evaluated by MTT assay following standard protocol. In brief, after culturing, the culture medium is removed and rinsed with 100 μl PBS followed by addition of 100 μl MTT solution (0.5 mg/ml) and incubated for 4 hr at 37°C in 5%CO_2. After incubation, MTT solution is replaced with 100 μl of DMSO and then absorbance is measured at 490nm using UV-Visible spectrophotometer.

Cell proliferation

The proliferation of cells cultured on the scaffold shall be measured by DNA quatification method.

RESULT DISCUSSIONS

Fabrication of 3D printed scaffold

SA/SF microfibrous scaffolds with different composition (SA/SF: 90/10, 80/20, 70/30, 60/40) were fabricated using an in-house built 3D printer. The polymers blends were printed into

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Partha Sarathi Mashu
16/12/21

layer by layer assembly using 3axis- robotic system. The SA/CH blend solution was dispensed from the nozzle into CaCl₂ solution which instantly solidified the printed 3D structures. Scaffolds were then freeze-dried for further study.
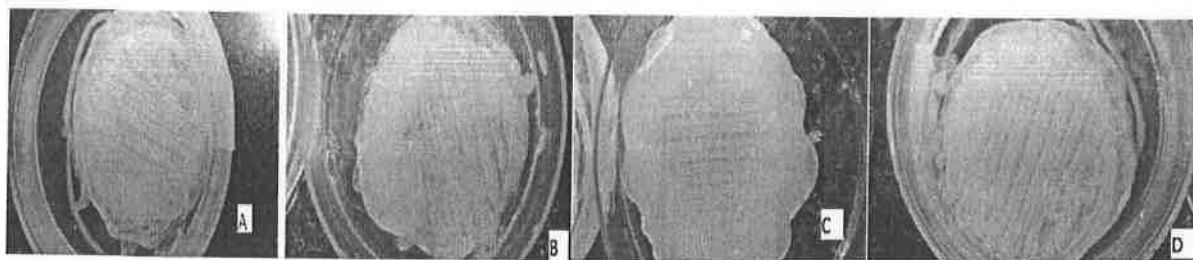
Images of SA/SF blend scaffolds with different ratios of SA/SF A) 60/40; B) 70/30; C) 80/20 D) 90/10
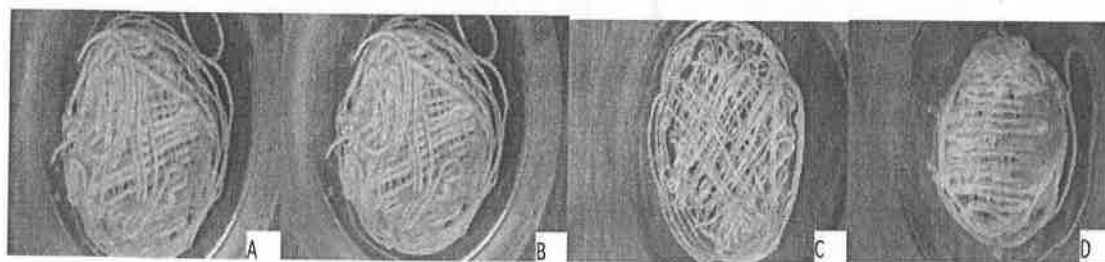
Images of SA/SF blend scaffolds(freeze-dried) with different ratios of SA/SF A) 60/40; B) 70/30; C) 80/20 D) 90/10

Morphological analysis

The measured fiber diameter was $820\pm103\mu m$, $818\pm 93\mu m$, $787\pm83\mu m$ and $740\pm88\mu m$ and pore size was $686\pm88\mu m$, $659\pm108\mu m$, $633\pm121\mu m$ and $527\pm80\mu m$ for SA/SF:90/10, 80/20, 70/30 and 60/40 respectively. The pore size and fiber diameter were decreased when the silk fibroin content was increased. Fiber formation was uniformly consistent with viscosity as the silk content was increased.
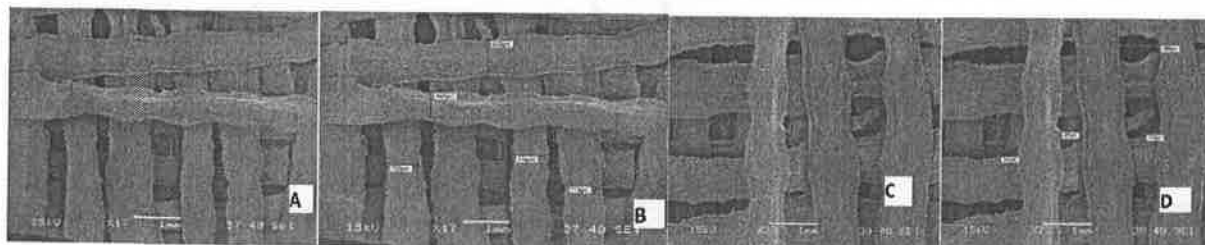
SEM images of SA/SF blend scaffolds with different ratios of SA/SF A) 60/40; B) 70/30; C) 80/20 ; D) 90/10

Pantha Sanathi Mashi
16/12/21
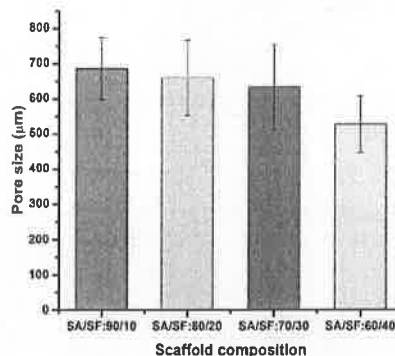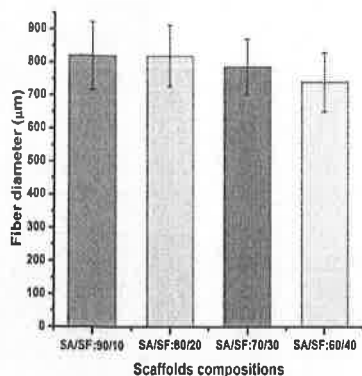
XRD-analysis

SF characteristic peak around 20° and the SA characteristic peak around 13.7° did not appear clearly in the blend scaffolds. Reason for this due to increased interaction between SF and SA molecules. resulting in a decrease in the crystalline structure of the blend scaffolds. The sharp peaks at 2 around 32°, 42°, and 45° may be artificial peaks caused by remnant salts.
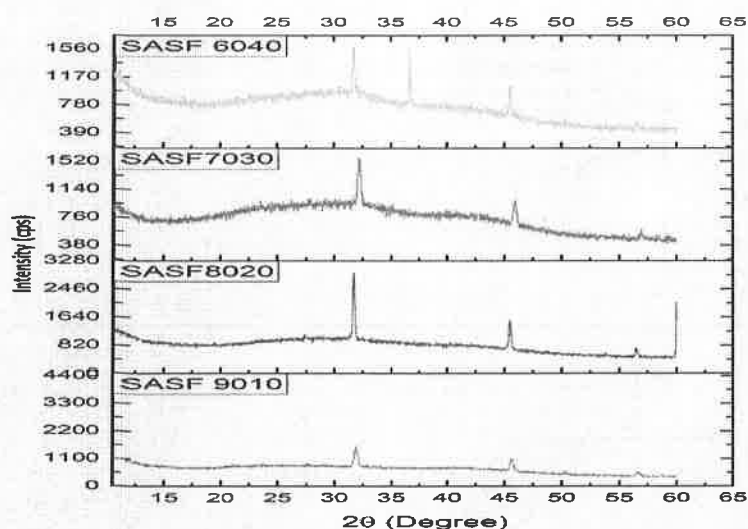
Conformational-structure-analysis (FTIR)

The area of the –OH bands (4000–3000 cm-1) in the spectra is much smaller only in SA/SF (60/40) due to loss of bonded water after cross linking with silk fibroin. Crystal structure changes in the SF/SA scaffolds after calcium ions treatment were characterized by FTIR. However, adding the different content of sodium alginate, the absorption peaks of the blend scaffolds did not obviously shifted, locating at 1631, 1522, and 1232 cm-1. These results demonstrated the crystal structure of silk fibroin exhibited the silk I and silk II co-existed in the SF/SA hybrid scaffolds.

Pantha Sanathu Mayli
16/12/21
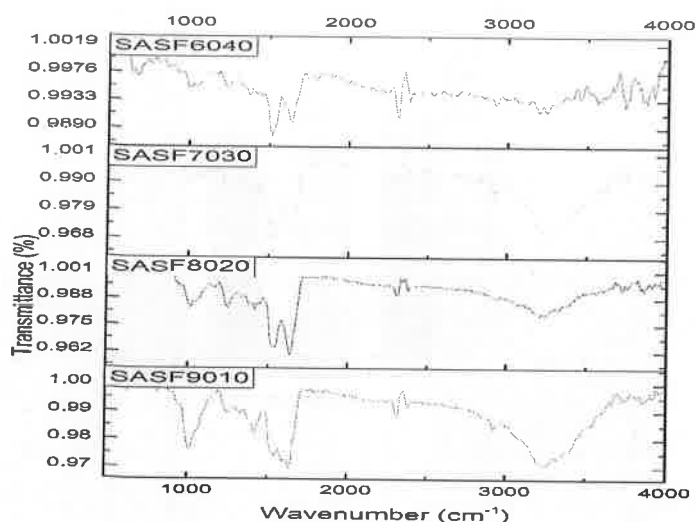
Swelling behaviour study of SA:SF Scaffolds

The swelling ratio was shown to be correlated to the scaffold composition. Because SA swells more than SF, the swelling ratio increased significantly when the SA content was increased. However, the SA/SF:90/10 with highest swelling percentage of 230 because of its larger diameter pores, excellent hydrophilic nature of Sodium alginate.
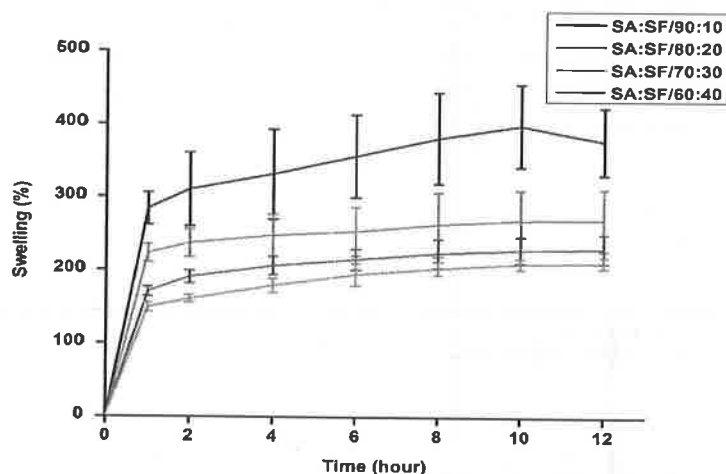
Degradation study of SA:SF Scaffolds

The degradation pattern based on the final mass loss follows- SA/SF:90/10 >SA/SF:80/20>SA/SF:70/30>SA/SF:60/40, the minimum mass loss was 27.235 ±1.79 % was observed in the SA/SF:60/40.

Partha Sarathi Mushi
16/12/21
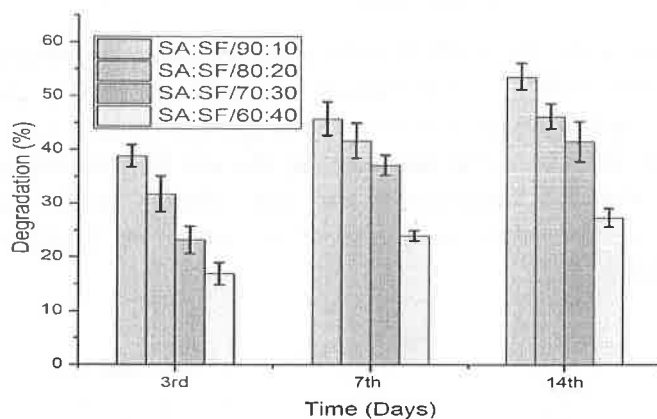
CONTACT ANGLE OF SA/SF SCAFFOLDS

The surface hydrophilicity significantly influences cell-biomaterial interaction and hence important to investigate this property of the prepared scaffold. The contact angles of the SA/SF films measured in the range of 50° to 80° (less than90°) represents the hydrophilic nature of the scaffolding material and thus the fabricated SA/SF scaffolds are favorable for bone tissue engineering applications.

Pantha Sanathi Mashu
16/12/21
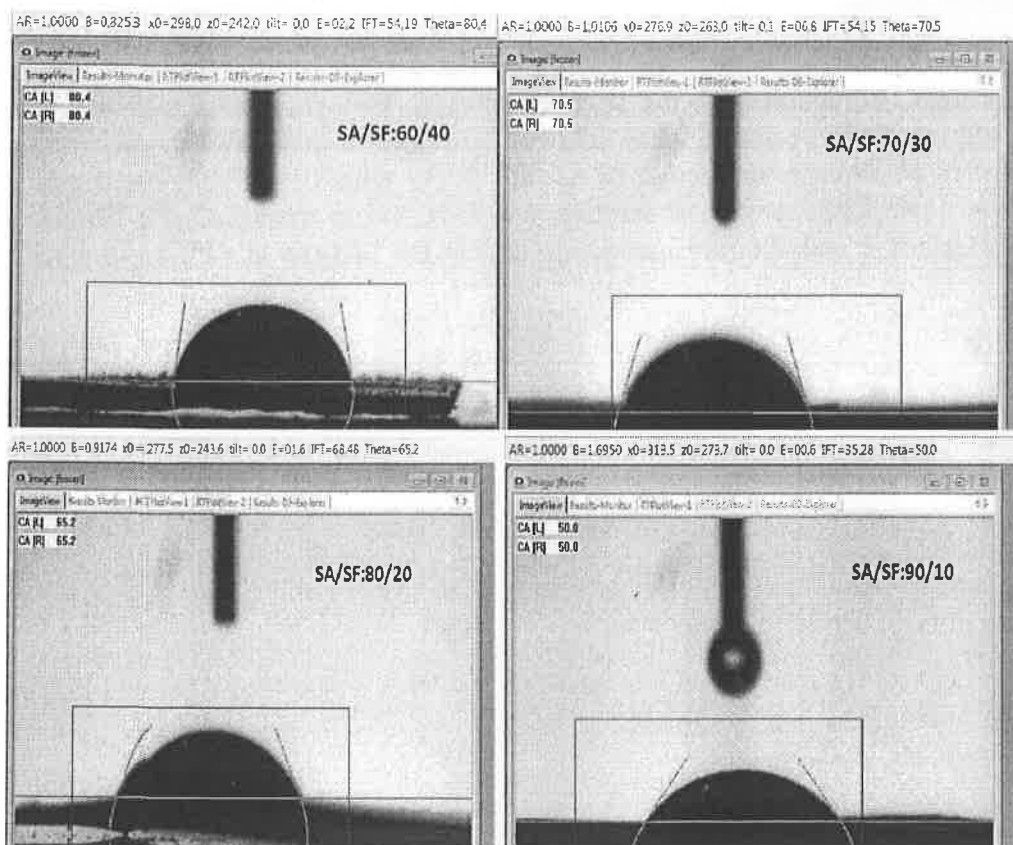
TENSILE STRENGTH OF SA:SF SCAFFOLDS

Mechanical strength is an important factor for the scaffold to be used for tissue engineering applications. The scaffold should have sufficient mechanical strength so that it can be sustained during implantation in-vivo and provides stability to the growth of new tissue till tissue regenerated for filling the defect. The strain (%) decreases as the silk fibroin content decrease in the scaffolds due to the less interaction of silk fibroin with sodium alginate.Maximum Tensile strength was 0.83Mpa for SA/SF:60/40 where as SA/SF:90/10 had minimum tensile strength of 0.51Mpa.
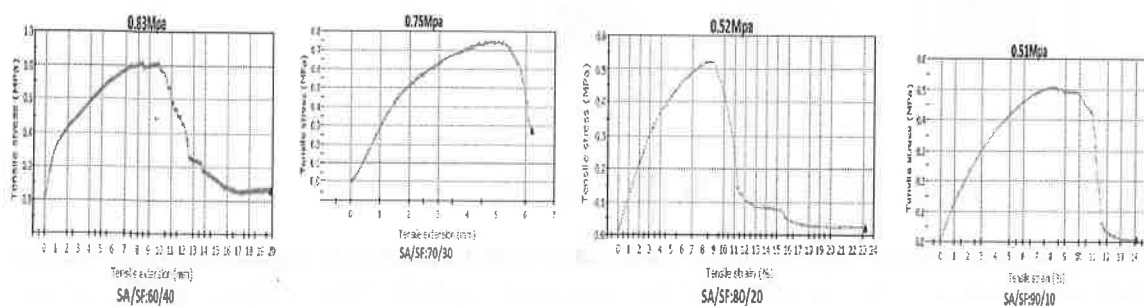
Protein adsorption study

Proteins are allowed to be adsorbed over the surface of the scaffold in protein adsorption studies to assess protein interaction with the scaffold surface. This study is significant in terms of cell-scaffold interaction because when scaffolds are used in in-vivo or in-vitro cell studies. Higher protein absorption was found in SA/SF: 90/10 where as SA/SF:80/20 and SA/SF:60/40 showed remarkable protein absorption which is due to increased silk fibroin content that may offer better cell scaffold interaction during the in-vitro as well as in-vivo studies.

Partha Sarathi Mashi
16/12/21
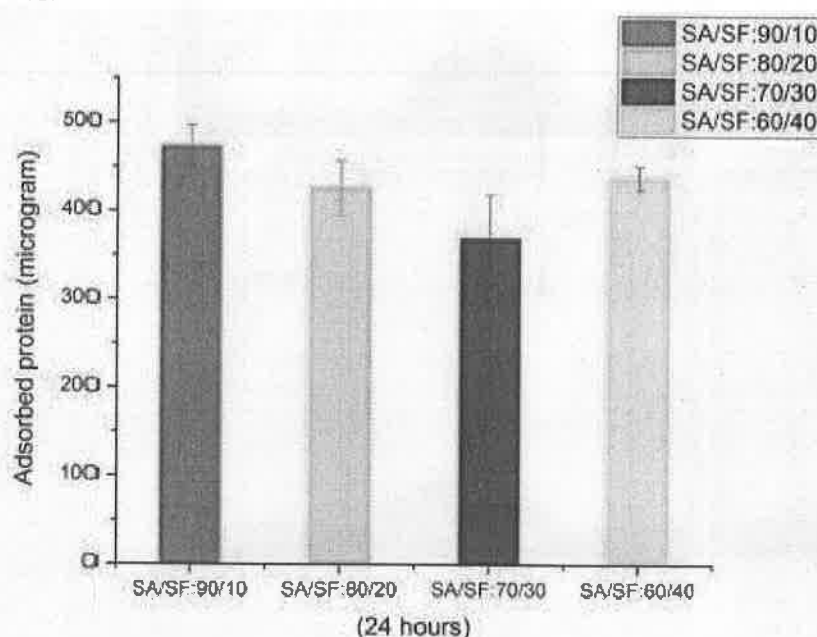
In-vitro Biomineralization study

Mineralization of bone takes place during development, remodelling of existing bone, and fracture repair. Biomineralization is the process of depositing a layer of carbonated apatite over the scaffold after it has been implanted inside the body. This is a highly desirable property for synthetic biomaterials. When the scaffold comes into contact with body fluids, a bone-like apatite layer forms on the surface, aiding in the bonding with living bone tissue. The deposited apatite layer was characterized by SEM.
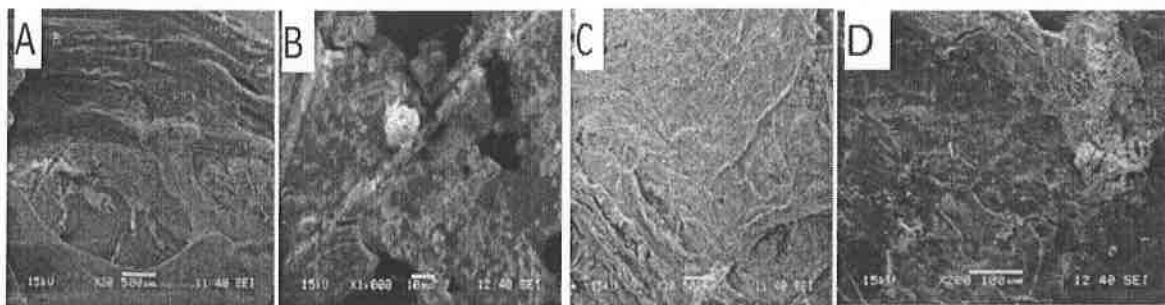
SEM images of SA/SF blend scaffolds with different ratios of SA/SF A) 60/40; B) 70/30; C) 80/20 ; D) 90/10

Saos-2 Cells

Saos-2 Cells were Procured from National Center for Cell Science , Pune , India for in-vitro cell study.

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16/12/21
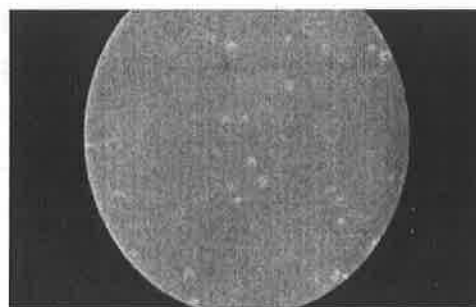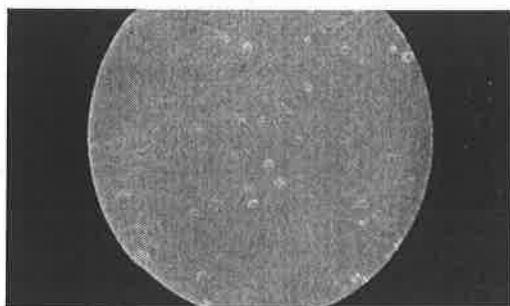
Fabrication of 3D prited SA/SF/PVA Scaffold

Tensile Strength Of Sa/Sf/Pva Scaffolds

Mechanical strength is an important factor for the scaffold to be used for tissue engineering applications. The scaffold should have sufficient mechanical strength so that it can be sustained during implantation in-vivo and provides stability to the growth of new tissue till tissue regenerated for filling the defect. The strain (%) increases in SA/SF:60/40 due to PVA which is 0.88 Mpa where as in SA/SF:60 it was 0.83Mpa.
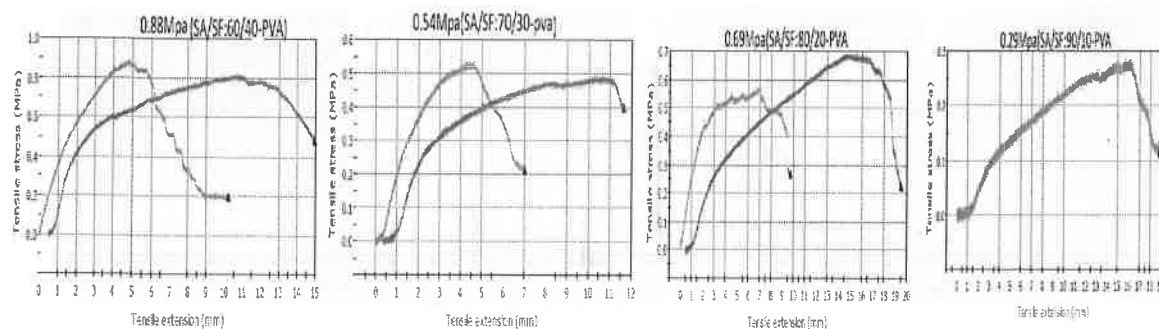
Conformational-structures-analysis (FTIR) SA/SF/PVA SCAFFOLDS

Strong absorption band on the FT- IR spectrum of SF was observed for amide I, amide II and amide III at about 1655 cm−1,1539 cm−1, and 1238 cm−1, respectively. Amide I band mainly is related to the (C=O) stretching and low participation from the (N-H) in-plane bending vibration. Amide II band mainly is due to the (N-H) distortion and little stretching vibrations of the (C-N). Also, the amide III band is due to the major subscription stems from the (N-H) vibration and small stretching vibrations of the (C-N) . The band at 2932 cm−1 was related to the symmetrical and asymmetrical stretching vibrations of the C-H band, and the band at 3200 cm−1 to 3600 cm−1 (3309 cm−1) was related to the O-H stretching vibrations specified in the hydrogel combination with the SF.

Paretha Sanathu Mashi
16/12/21
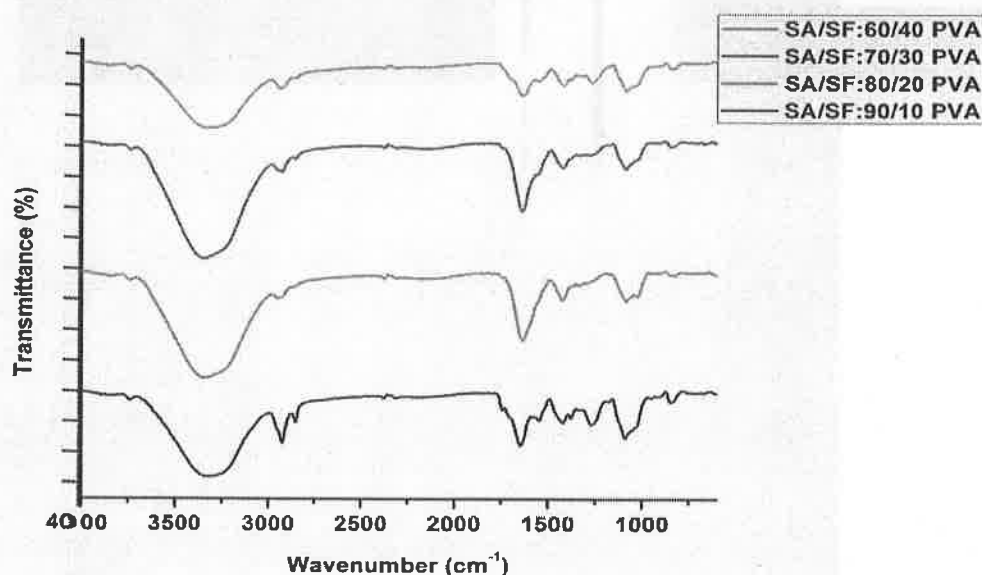
FUTURE WORK

1. In vitro cell study of SA/SF & SA/SF/PVA scaffolds
2. To improve bioactivity and osteogenic potential of SA/SF/PVA scaffold by incorporating hydroxyapatite (HA).
3. To assess the biocompatibility of the developed scaffold for bone tissue regeneration.

TIME LINE FOR FUTURE WORK (tentative)

Dec2021 -Jan 2022	Physico-chemical haracterisation of SA/SF/PVA scaffolds will be completed In vitro cell study of SA/SF scaffolds.
Jan -Feb 2022	In vitro biocompatibility evaluation of SA/SF/PVA scaffolds
March-May.2022	To prepare and characterize physicochemical, mechanical and biological property of SA/SF/PVA-Hydroxyapatite scaffolds,
May – June 2022	To improve angiogenesis property of the scaffold
July-August 2022	In vivo study of SA/SF/PVA & SA/SF/PVA/SF composite scaffolds
August -Sept 2022	Synopsis and draft thesis writing
Sept-Dec 2022	Final Thesis Writing

Publication:

Draft Manuscript Prepared which will be communicated in this month based on first objective

Partha Sarathi Mashi

|6|12|2|

ROADMAP FOR FUTURE WORK (Tentative)

OBJECTIVE	Dec2021-Jan2022	Jan-Feb2022	March-May2022	May-June2022	July-August2022	Augst-Sept2022	Sep-Dec2022
Physico-chemical characterization of SA/SF/PVA scaffolds. In vitro cell study of SA/SF scaffolds	■						
In vitro biocompatibility evaluation of SA/SF/PVA scaffolds		■					
To prepare and characterize physicochemical, mechanical and biological property of SA/SF/PVA-Hydroxyapatite scaffolds			■				
To improve angiogenesis property of the scaffold				■			
In vivo study of SA/SF/PVA & SA/SF/PVA/SF composite scaffolds					■		
Synopsis and draft thesis writing						■	
Final Thesis Writing							■

Partha Sanathin Mughi
16/12/21

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Partha Sanathi Mashi

16/12/2)

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Partha Sarathi Mishra
16/12/21

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Partha Sarathi Mashi
16/12/21

To,

The Dean (AC)
NIT Rourkela - 769008

Subject- Appeal for extension of studentship period

Respected Madam,

As per 2019-84-Senate 21 my studentship extension approved till 30 June 2021. But due to Covid-19 Pandemic institute lockdown i was not able to submit my thesis before 30 June 2021. Also after returning to the Campus in december 2020 i was unable to complete my experimental works again due to closure of department in 2021.

Therefore i request you to kindly further extend my studentship for submission of my thesis for at least 3 consecutive semester for which i shall be obliged of you.

Yours Sincerely

NIT, Rourkela
01.09.2021

Partha Sarathi Majhi
ROLL- 510 BM604 -156-
Biomedical Engineering Department.
-106-

To

Dean, (Academics)

NIT Rourkela

Annexure – A6

Sub : Request for extension of PhD for another six-months

Respected Madam,

I am Mr. P. Ramakrishna (Roll No. 513CH 3074), registered for PhD under Prof. Abanti Sahoo, Chemical Engg. Dept. I am going to complete 8-years in December-2021.

Due to COVID-19 Pandemic I had gone to my home where I had health issues for which I could not return early and I came back to NIT Campus in November-2021. I have communicated two articles, which are under review since last six months. As soon as one paper is accepted, I will give my synopsis seminar. The list of communications is also enclosed herewith for your kind information.

Therefore I request you to kindly permit me an extension of another six-months so that I can give synopsis seminar within June-2022.

Thanking You

Yours Sincerely

P Ramakrishnan

P Ramakrishnan

Roll No. 513CH3074

Chemical Engg. Dept.

Conference Presentation

1. *P Ramakrishnan and Abanti Sahoo;* Modelling the diffusion mass transfer in high temperature Solid Oxide Fuel Cell using binary friction model, International Conference on "Recent Advances in Modeling and Simulation techniques in Engineering and Sciences" (RAMSTES-2021), during 8-10th december held at Manipal University Jaipur.

Journal Communications (Under Review)

2. *P Ramakrishnan and Abanti Sahoo;* Modeling mass transfer in SOFC anode: A comparison between diffusion mass transfer models. **International journal of heat and mass transfer.**
3. *P Ramakrishnan and Abanti Sahoo;* Electrochemical modelling of methane fueled SOFC considering modified binary friction model and surface diffusion. **International journal of hydrogen energy.**

As per Institute regulations, one SCI-publication is required to give synopsis seminar. As two papers are under review and some more time is required to get published, Mr P Ramakrishna may be permitted another six months extension. His work is over. As soon as one paper will be published, he will give his synopsis seminar.

A saha
09.12.2021

-107-

DR (AC)

May be put up to Senate for extension

S. Mishra
14/12/2

Mr. RRS

Fair ma Pl.

J. Achy
14/12/2021

CS

FTS: 43425

Annexure – A7

ACADEMIC SECTION
0 9 DEC 2021
M
National Institute Of Technology, Rourkela-133

ACADEMIC SECTION
1 4 DEC 2021
National Institute of Technology, Rourkela

To,

Dean Academic

NIT Rourkela

(Through Proper Channel) Mr CRI for n/a act.

Sub : Request for granting PhD program extension by another 1 year beyond 8 years

Sir/ Madam,

Mr. Srihari Nayak bearing Roll. No. 513EE1047 had joined with me for PhD program since January 2014. On December 31st 2021 he will be completing 8 years into this program. Since he doesn't have a SCI Journal publication , he is not in a position to deliver Synopsis Seminar by December 31st 2021.

I would be much obliged if Mr Nayak be granted program extension by another 1 year or else his studentship will be terminated.

Thanking You.

DRC Members

[1] Prof D Patra (HOD)- *Dipti Patra*

[2] Prof A K Panda- (On leave)

[3] Prof P K Sahu-

[4] Prof S Das-

[5] Prof K B Mohanty- *KBMohanty*

[6] Prof S Maity-

[7] Prof S Karmakar- *Karmakar 08/12/2021*

[8] Prof S Samanta-

DR (AC)
To be put up to serali
S.Nlin 14/12/21

Sanjeeb Mohanty 8·12·2021

Supervisor of Mr. Srihari Nayak

FTS/.......39355..........

No.NITR/CR/HOD/20.21...../M/4.0.526..... skpal@nitrkl.ac.in

Date.....02-12-21.........

Requesting extension for thesis submission

Annexure – A8

From : Aiswarya Dash <aiswarya.dash2010@gmail.com>   Tue, Nov 30, 2021 10:28 PM

Subject : Requesting extension for thesis submission

To : Sumit Pal <skpal@nitrkl.ac.in>

To
The Dean Academic
NIT Rourkela

Sub: Requesting extension for thesis submission
(Through the Supervisor)

Respected Madam,
I am Aiswarya Dash (512CR1014), PhD student in the department of Ceramic Engineering. I have enrolled for PhD on 12 April 2013 under the guidance of Prof. Sumit Kumar Pal and Prof. Ritwik Sarkar. I took withdrawal on 20 June 2017 with the permission of my Doctoral Scrutiny Committee. After my withdrawal, I completed the rest of my research work from my current organization (Ajeenkya DY Patil University, Pune). Then I finished my data analysis and prepared my draft thesis for the last one year.
My synopsis seminar was planned before April 2021. At the time of synopsis seminar notification, the NITRIS system showed that I was not eligible for synopsis seminar, because the system can only allow those who had completed 18 credit courses. This was not aware of the fact when these rules had been implemented. At the time of my registration, this rule was never there. I had my registration as well as progress seminar completed with the approval of the academic section. I have written several emails to Dean Academic in this regard (Documents attached). Later it was found that it was not required to complete 18 credit courses during my admission time. Then, the issue was resolved and the portal had been modified. This took a longer period of time (approximately 4 weeks). After the synopsis seminar notice had been published (one week prior to the date), I gave my synopsis seminar on 25 May 2021. My DSC Chairman advised me to contact you for further guidance and approval for thesis submission.

I had requested the Dean- Academics for a six months extension to submit my thesis. I have applied through the proper channel for the extension (FTS number and date), but no response came from him.
In the interim, my family members had suffered from COVID for which I had to take care of them during that period as well as with post-COVID complications. In addition, I too suffered from slip disc during the month of September 2021 for which I was on complete bed rest for 3 weeks. These tough times hindered me in completing my thesis on time (Document attached)

Therefore, I request you to grant me an extension till February 2022 to submit my final thesis.

As I have already given a synopsis seminar once, kindly grant me waiving fees for the next semester.

Thank you.

--
Aiswarya Dash
Doctoral Fellow
Department of Ceramic Engineering
National Institute of Technology
Rourkela-769008
Odisha, India
e-mail: aiswarya.dash2010@gmail.com,

[handwritten notes:] Previously we applied for extension through FTS 1941 R dated 31-05-2021

Due to some unavoidable circumstances their could not be submitted.
I recommend extension upto February, 2022

S. K. Pal
(Supervisor)

(Chairman)

(DSC-member)

(Co-sup)
03/12/21

DSC member 3/12/21

(HOD,CR) 3/12/21

01-12-2021, 12:1

—110—

SPARSH HOSPITAL (Since 2015)

D nori - Lohegaon Road, Near H.P. Petrol
Pump, Sathewasti, Lohegaon - 47.
Ph.: 93250 31190

Dr. Satish Uchale
MBBS. DNB. MNAMS. (Reg. No. 0468)
Orthopaedic & Joint Replacement Surgeon
©: 9545555356
dr.satishuchale@gmail.com

Panel Consultant :-
- Sahyadri Hospital
- Ruby Hall
- Inlaks Budhrani Hosp.
- Orchid Hospital
- Inamdar Hospital
Ex. Assit. Professor D.Y. Patil Medical

ORTHOPAEDICS & GENERAL CARE
ISO 9001 : 2015 Certified

PHYSIOTHERAPY
DIGITAL X-RAY
PATHOLOGY LAB

Dr. Rashmi Kunwar Uchale
BSC. MBBS. DNB., MNAMS. (Reg. No. 3521)
Family Medicine & Diabetes Specialist
©: 9545555352
dr.rashmi.kunwar@gmail.com
Ex Medical Officer at :-
- SGRR Medical, Dehradun
- Kaya Life, Mumbai
- Inlaks Budhrani Hospital
- ECHS Doctor, Lohegaon
ESIS Doctor
Ex. Assit. Professor D.Y. Patil Dental

Name : Aishwarya Dash   Add.: Lohgou Age: 33 Date: 13/09/2021

R C/o/△Sis: L leg radiculopathy / DM / HTN / Thyroid / PHYSIOTHERAPY :-

с lower back pain : 2 days 4pd on off

x L SSpine AP / lat - mild Ised LS, Disc space с 5-6 times
early changes of spondylosis

6.30 - 8.30
Physio -
- IFT Lower back 6 days

- Followed с Back Stevens

- Rest for 03 days

- F/U 03 days

- 1 Tab. Pancott (Before food)

- 2 Tab. Etoragin 4 / Etora T4

- 3 Tab Neurof0x N 8pm   10 days

- 4 Tab. Etora 8f B 6pm

- 5 Syp. Rich D3 alternate day x 6 day

- 6 D once MR zee CA

Follow up 18/09/21
slip disc is ?
Advise
- complete bed rest
- PT to be continued

FOLLOW UP DATE [   ]   **MEDICINES CHECKED BY DOCTOR** [   ]
• Please Bring This Paper During Next Visit. • Doctor Home Visit On Appointment. • Laboratory Home Collection Cell : 96043 56357 / 79721 98118

OPD. Timing : 10.00 am. to 01.00 pm. & 6.30 to 9.00 pm.

-111-

GD

NATIONAL INSTITUTE OF TECHNOLOGY
ROURKELA-769008, ODISHA

Annexure – A9

Date- 21-09-2021

To,

Dean (Academic)

NIT Rourkela

Sub: Addition of Co-PI

(Through DRC- chemists)

Dear Madam,

Mr. GARIMELLA JAWAHAR LAL NEHRU (521CY6020) has joined as JRF under the CSR-RSP funded project entitled " Waste to Wealth- Sustainable and Innovative Organic farming and Techniques for women farmers of the peripheral areas of RSP" (Project Code- SR/21/CY/013). The PI and Co-PIs of the project are my self, Prof. Nihar Ranjan Mishra (HS) and Prof. Rama Chandra Pradhan (FP). However, due to no provision available during the provisional registration of the student in NITRIS portal , we could only put Prof. Nihar Ranjan Mishra (HS) in it, no provision was available to add the second Co-PI. Thus we request you to approve the addition of second Co-PI into the Nitris portal.

Regards,

Dr. Debayan Sarkar   Dr. Nihar Ranjan Mishra   Dr. Rama Chandra Pradhan

(DRC- Members)

(HOD- CY)

(PTO)

DS (AE)
Pl. enclose clause-4.1 before
sending to Dean(AE).

DR(AE)

Note on pre-page by DRC-CY
is forf zfd for (approval regdg.
addition of Co-P.I, in case of GJL Nehra's
521 CY 6020, may kindly be perused.

G.r 17.XI/21

As per clause 4.1. of the PhD regulations there can be
maximum two supervisors. In case of two supervisors,
one will be called Principal
supervisor and the other co-supervisor.

(There is no provision to add 3rd supervisor (2nd co-supervisor)
in the regulations.

In view of the above, request of DRC may be decided.

copy of clause 4.1
encl. for reference

J. Ach.
23/11/2021

Dean(AE)

Since there is no provision for 2nd Co-supervisor it may
be put up in the senate its being any change. As it
new this may not be ~~accepted~~ considered. However director
can give his opinion and approval.

S. Mish
24/11/21

Director

Put up in 2nd Senate
the
G.B 25/11/21

DR (AE)
Mr. CAI for Na P.
J. Ach. 29/11/2021

To be put up in Senate

S. Mish 27/11/21

-113-

No. NITR/SR/21/M/828

Date: 15.6.21

FTS/1726 R

SRICCE
2 7 MAY 2021
NIT Rourkela

ANNEXURE 1

SRICCE
2 5 JUN 2021
NIT Rourkela

SPONSORED RESEARCH & INDUSTRIAL CONSULTANCY CELL
NATIONAL INSTITUTE OF TECHNOLOGY
ROURKELA- 769 008, ORISSA

SRICCE
3 0 JUN 2021
NIT, Rourkela

2 8 JUN 2021
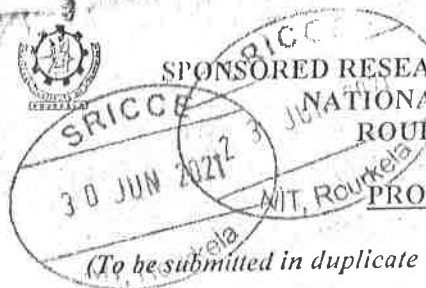
PROJECT REGISTRATION FORM

(To be submitted in duplicate along with the sanction letter from the sponsoring agency)

1. Title of the Project : Waste to Wealth- Sustainable and Innovative organic Farming Techniques especially for women Farmers of the Peripheral Areas At RSP.

2. Name of the Sponsoring Agency & Address : SAIL, RSP, Rourkela, odisha

3. Sanction Letter No. & date : Ref No: CSR/2020-21/60 Dated: 19 May 2021

4. Total Grant Sanctioned : ₹ 45,02,282·00

5. Duration & Date of Commencement of the project : 04 years (48 months) Date of start: 15·05·2021

6. Name of the Department/ Centre, where research is to be performed: Dept of Chemistry

7. Name (s) & Designation of the Principal Investigator (s) : Prof. Debayan Sarkar, Associate Professor

8. Name (s) & Designation of the Co- Principal Investigator (s) : Prof. Rama chandra Pradhan, FP Prof. Nihar Ranjan Mishra, HS Associate Professor

Amount not received till date for this project.

Clig
[17/07/21]

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9. Year- wise- break-up of grant sanctioned:

Head of expenditure	1st year	2nd year	3rd year	4th year	
Salary/ Fellowship (JRF)	372000	372000	372000	—	
Equipment	100000	—	—	—	
Consumables	250000	200000	125000	100000	67500
* Contingencies	56700	63400	63400	63400	246900
Travel & Training	103120	206240	206240	206240	721840
Service Charges (consultant)	360000	360000	360000	360000	1440000
** Others (Please specify) Institute over head (5%)	59256	56912	53162	33312	202642
Total	1301076	1258552	1179802	762952	4502382

* & ** = Administrative cost

10. Mode of payment of grant
in installments, if any .

RTGS /NEFT / DRAFT

11. Details of project staff sanctioned :

Name of the post	Consolidated compensation/ fellowship	No. the post
JRF	₹ 31000/= per month	01
consultant	₹ 30,000/= per month	01

12. Whether necessary/ expertise and facilities are available
within Department/ Centre, if no, then state where the
additional facilities are available in the Institute

Yes/ No .

Forwarded by

Signature of PI

Head of the Concerned Department

Project Code   SR/21/CY/006   (To be assigned by SRICCE)

SR/21/CY/013

Asst.SG-I (SRICCE)

01.07.2021

15/07/2021

Approvals in original may kindly be
arranged from PI to be archive in file

Asst. Registrar (SRICCE)

Dean (SRICCE)   17/07/2021
DEAN (SRICCE)
National Institute of Technology
Rourkela-8 (Odisha)

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Annexure – A10

21 SEP 2021

National Institute of Technology, Rourkela
राष्ट्रीय प्रौद्योगिकी संस्थान, राउरकेला
Department of Mechanical Engineering

Dean (Ac)

The applicant Mr. Manish Chandra Vinay was selected by DRC for the executive Ph.D. program based on his interest, vast industrial experience and performance in interview.

But, due to anomaly in Mark to CGPA conversion rule in B. Tech degree, he was not called for admission by the academic office.

DRC found that the student shows his keen interest for the program and also his vast experience will help the Department to get good industrial experience in Quality control. This will enhance the industry-institute relationship.

Hence, DRC strongly recommend his request for admission to the Ex. Ph.D. Program for the Autumn session 2021.

DRC Approval

HOD
16/9/2021

To,   Date: 16/08/2021

Dean Academic
NIT Rourkela

(Through Proper Channel)

Subject: Admission to Executive PhD in Mechanical Engineering Department

Respected Madam/Sir,

I would like to inform you that I am P B Manish Chandra Vinay, working as a Deputy Director (**Group A Officer**) in Industrial Engineering Group of National Productivity Council Kolkata which comes under the Department for Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce and Industry and I have applied for admission to Executive PhD (Application Id: 9AT210115) in Mechanical Engineering Department of NIT Rourkela.

I appeared for the interview for admission and my interview went well. I was surprised not to find my name in the list of selected candidates and then I contacted Prof. S. K. Sahoo, HoD of Mechanical Engineering Department and he informed me that I do not fulfil the minimum qualification requirement in BTech.

I would like to bring to your notice that my BTech Institute (i.e. National Institute of Foundry & Forge Technology) do not have any criteria for converting CGPA into equivalent percentage of marks and in such cases, the equivalence is established by dividing the students' CGPA by the maximum possible CGPA (i.e 10) and multiplying the result with 100. Considering this I have 61.4 percent marks in my BTech (**please find attached the Grading System and declaration of my institute in this regard**).

As per the NIT Rourkela notice for admission to Executive PhD Program, the minimum qualification requirement in BTech is 65% marks and there is a relaxation of 0.5 in CGA or 5% in marks in BTech for the Group-A officers of Central/ State Govt./ Autonomous Bodies who have at least 5 years of experience as on 30th June 2021.

I am also having 11 years of experience as a Group A officer (**please find attached my experience certificate**). Therefore, I fulfil the minimum qualification requirement in BTech which will be 60% marks, considering 5% relaxation in marks for having more than 5 years of experience as Group A officer.

Therefore, I request you to kindly consider the above facts and allow my admission to the Executive PhD in Mechanical Engineering Department. I hereby assure you that I will successfully complete the course requirements.

Thanking you,
Yours faithfully,

Manish Ch. Vinay
P B Manish Chandra Vinay
Executive PhD Application Id.: 9AT210115
Deputy Director (Industrial Engineering Group)
National Productivity Council, Kolkata

Dean(Ac)

P B Manish chandra Vinay (Appliatr Id: 9AT210115) applied for executive Ph.D Program. He was approved & selected for the program by the DRC. He secured 61.4% of mark in B.Tech., but he has 10 Years of Industrial experience equivalent to Grade A officer. Hence, as per rule he will get 0.5 CGPA or 5% mark relaxation, i.e., for admission 60% mark is the minimum required With experience. Accordingly DRC approve his admission.
Hence, request your approval to issue admission offer to the student Mr. P B manish chandra Vinay.

15/8/2021

PTO

(The applicant has secured 6.14 CGPA in his B.Tech, not 61.4% marks as mentioned by HOD(CME)).

As per advt., the candidates with B.Tech degree should have 7.0 CGPA or 65% marks. Since the candidate is having more than 5 years of service as Group-A officer (as claimed by him) 0.5 CGPA may be relaxed. Accordingly, he needs to have 6.5 CGPA. But the candidate has only 6.14 CGPA in his B.Tech.

Accordingly, ~~not~~ he is not ~~eligible for admission~~ satisfying eligibility criteria for admission.

Put up for king perusal and further directive.

D.tch.
23/8/2021

Dean(CAC)

If the candidate does not satisfy the eligibility criteria for admission it cannot be considered.

S.Mishra
25/8/21

Pl. put an intimation letter.

D.tch.
26/8/2021

OS(AC)

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राष्ट्रीय प्रौद्योगिकी संस्थान राउरकेला
NATIONAL INSTITUTE OF TECHNOLOGY ROURKELA

Application Form for Admission in Executive Ph.D. Programme

Application No	: 9AT210115
Admission Category	: PartTime
Studentship Category	: Self Sponsored Student (Part Time)
Proposed Research Area	: Industrial Engineering & Management

Department Applied :

Preference	Department / Specialization	COE
1	Mechanical Engineering	No
2	School of Management	No

Personal Information :

Applicant Name	: P B MANISH CHANDRA VINAY	Category	: SC
Date of Birth	: 04 Jun 1982	Disability Name / Percentage	: NA / 0
Blood Group	: O+ve	Mother Tounge / Religion	: Hindi / Hindu
State of Residence	: Jharkhand	Gender / Marital Status	: Male / Married
Country	: India	Husband Name	: NA
Email	: searchmanish@gmail.com	Mobile No	: 9007841464
Currently Employed	: Yes	Employer	: Autonomus

Parental Information :

Father's Name	: Birendra Manjhi	Mother's Name	: Pramila Devi
Guardian Name / ContactNo	: Birendra Manjhi, 9835389444	Name of Financing Person	: Birendra Manjhi
Father's Occupation	: Retired from Service	Mother's Occupation	: Housewife
Parent's Annual Income	: 400000	Relationship with Financing Person	: Father
Address	: NA	Mobile No	: 9835389444

Communication Address

Address Line1	:	Ideal Regency, Block-F, Flat-8E
Address Line2	:	46 Diamond Harbour Road, Thakurpukur, Kolkata
Country	:	India
State	:	West Bengal
PIN Code	:	700063
Phone Number	:	9007841464

Permanent Address

Address Line1	:	Flat No.- 403, CMK New Palace
Address Line2	:	Pramathnagar, Parsudih, Jamshedpur
Country	:	India
State	:	Jharkhand
PIN Code	:	831002
Phone Number	:	9007841464

Academic Career :

#	Examination	Programme	Branch / Trade / Specialization	School / College	Board / University	YOP	Marks(%)/ CGPA	Division
1	10th	10th	Hindi, English, Math, Science, SSt.	Kendriya Vidyalaya, Govindpur, Dhanbad	CBSE	1998	67.67	1st
2	12th/Diploma	12th	Science	Kendriya Vidyalaya, Maithon Dam, Dhanbad	CBSE	2000	61.00	1st
3	Bachelor's Degree	B.Tech	Manufacturing Engineering	National Institute of Foundry & Forge Technology, Ranchi	Ranchi University	2007	6.14	1st

Experience (if any) :

#	Name of Organisation	Position	Joining Date	Leaving Date	PB
1	NPC, 9, Syed Amir Ali Avenue, Kolkata-700017	Deputy Director	08 Feb 2016	06 Jul 2021	Consultancy & Training
2	NPC, 9, Syed Amir Ali Avenue, Kolkata-700017	Assistant Director	04 Aug 2009	07 Feb 2016	Consultancy & Training

Related to NIT Rourkela :

No, I do not have a close relative among officers and faculty of NIT Rourkela.

NATIONAL PRODUCTIVITY COUNCIL
9, SYED AMIR ALI AVENUE, KOLKATA-70001

Phones : 2287 6069, 2287 3116
Fax : (033) 2287 3919
E-mail : kolkata@npcindia.gov.in
NPC website: www.npcindia.org

राष्ट्रीय उत्पादकता परिषद
व अमीर अली एभेन्यु, कोलकाता-७०० ०१७

রাষ্ট্রীয় উৎপাদকতা পরিষদ
৯, সৈয়দ আমীর আলী এভিন্যু, কোলকাতা - ৭০০ ০১৭

5th July 2021

No. 121/PBMCV/ 39

Experience Certificate

This is to certify that Shri P B Manish Chandra Vinay, S/O Shri Birendra Manjhi is an employee of Regional Directorate, National Productivity Council, Kolkata and duties performed by him during the period(s) are as under:

Name of the Post	From dd/mm/yy	To dd/mm/yy	Total Period dd/mm/yy	Nature of Appointment	Department/Specially/Field of Experience
(1)	(2)	(3)	(4)	(5)	(6)
1. Deputy Director	08/02/16	Continuing	07/10/04	Permanent	Industrial Engineering
2. Assistant Director	04/08/09	07/02/16	03/06/06	Permanent	Industrial Engineering

Monthly remuneration (total)	Duties performed/experience gained in brief in each post	Place of posting	Nature of work.	Remarks, if any
(7)	(8)	(9)	(10)	(11)
Rs.123316/- (Pay Band 15600-39100, Grade Pay 6600) Level of Pay Matrix 11	Planning and executing training programs, general and specialized projects and research surveys in the field of Productivity and related fields, preparing proposals, undertaking studies in the areas of productivity improvement, organization restructuring, manpower optimization, setting up of production norms, work study, work measurement, safety, Lean Manufacturing, wage structure rationalization, Implementation of ISO 9001:2015. Preparing project and technical reports pertaining to the projects and surveys, Planning, designing & conducting training programs in the field of productivity, quality, safety & Lean Manufacturing. Participating in seminars, training programs and professional bodies' meetings.	Kolkata	Consultancy & Training	
Rs.70060/- (Pay Band 15600-39100, Grade Pay 5400) Level of Pay Matrix 10	Preparing proposals, undertaking studies in the areas of productivity improvement, organization restructuring, manpower optimization, setting up of production norms, work study, work measurement, safety, Lean Manufacturing, wage structure rationalization, Implementation of ISO 9001:2015. Preparing project and technical reports pertaining to the projects and surveys, Planning, designing & conducting training programs in the field of productivity, quality, safety & Lean Manufacturing.	Kolkata	Consultancy & Training	

2. It is certified that above facts and figures are true and based on service records available in our organization.

Signature

Name of the competent authority: S. Mallik
Regional Director
National Productivity Council, Kolkata

एस. मल्लिक/S. MALLIK
क्षेत्रीय निदेशक /Regional Director
राष्ट्रीय उत्पादकता परिषद /NATIONAL PRODUCTIVITY COUNCIL,
वाणिज्य एवं उद्योग मंत्रालय - भारत सरकार के अधीन
Under Ministry Of Commerce & Industry, Govt. Of India
9, सैयद अमीर अली एभेन्यु, कोलकाता-700 017
9, Syed Amir Ali Avenue, Kolkata-700 017

Stamp of the competent authority

Head Office : 'Utpadakata Bhavan', Lodi Road, New Delhi – 110 003

राष्ट्रीय प्रौद्योगिकी संस्थान, राउरकेला
NATIONAL INSTITUTE OF TECHNOLOGY, ROURKELA
NOTE SHEET

Against the recent advt. for admission to Exec. Ph D programme, the name of Mr. PB Manish Chandra Vinay was recommended by Mechanical Engg Deptt. However, while intial scrutiny at Academic Office level before publication of selection result, it was observed that the applicant was not fulfilling the eligibility criteria as he has secured CGPA of 6.14 in B Tech against the requirement of 6.5. His application is placed at Page - 93/c.

The matter of his admission was processed at page - 67/c, and it was decided there as the applicant is not satisfying the eligibility criteria, his admission cannot be considered.

Meanwhile, DRC, ME deptt. has again forwarded a recommendation (Page - 96/c) to consider his admission based on his vast experience, which will help the department to get good industrial experience in Quality Control.

As per his application, Mr. Vinay is presently working in National productivity council since Aug 2009 in the capacity of Assistant / Deputy Director.

The recommendation of DRC is placed for kind consideration and advice.

Submitted please.

DR (AC-Rec.)

/10/2021

Notes as at P-67/c (overleaf), may be perused.
The earlier application was put up with details of rule position.
Since the candidate does not satisfy eligibility criteria
this case was not approved.

Again the DRC has given similar request.
Put up for kind perusal.

D. Beh.
23/11/2021

Dean(AC)

As per institute rule the candidate does not satisfy
eligibility criteria and this case was not considered.
However if dept feels the candidate has very good
technical knowledge the case may be considered as
special case and needs director's approval.

S. Mis 25/11/21

Director

Put up to
this Senate

25/11/21

DR(AC)

To be put up in the Senate.

S. Mis 27/11/21

—122—

Mr. CN
for NA M.

Fwd: Recommendation for extension of Ph.D studentship of Debashish Kar (Roll No : 512CE1010)

From : Prof. Mahabir Panda <mpanda@nitrkl.ac.in>   Sun, 26 Dec, 2021 20:52

Subject : Fwd: Recommendation for extension of Ph.D studentship of Debashish Kar (Roll No : 512CE1010)

To : Academic (Research Scholars' Unit) <acad.res@nitrkl.ac.in>, Bamadev Acharya <acharyab@nitrkl.ac.in>

```
Sir,
Above is the concurrence of recommendation by email, of the Chairman of DSC of the cocerned
student regarding his request of extension of studentship till March 31, 2022 as mentioned
below in the forwarded mail. This is for your kind necessary action.

Thanks and regards,

Sincerely,

Prof. Mahabir Panda
Department of Civil Engg.
NIT Rourkela, Odisha, India 769008
Ph. 91-661-2462312 (O)

----- Forwarded Message -----
From: "Shishir Kumar Sahu" <sksahu@nitrkl.ac.in>
To: "Prof. Mahabir Panda" <mpanda@nitrkl.ac.in>
Cc: "DEAN-AC DEAN" <dean-ac@nitrkl.ac.in>
Sent: Sunday, December 26, 2021 11:17:40 AM
Subject: Re: Recommendation for extension of Ph.D studentship of Debashish Kar ( Roll No :
512CE1010)

Based on the recommendation of supervisor, the studentship of Debasis Kar is recommended to
be extended for consideration.
SKSahu
----- Original Message -----
From: "Prof. Mahabir Panda" <mpanda@nitrkl.ac.in>
To: "Shishir Kumar Sahu" <sksahu@nitrkl.ac.in>
Sent: Saturday, December 25, 2021 10:49:00 PM
Subject: Recommendation for extension of Ph.D studentship of Debashish Kar ( Roll No :
512CE1010)

Sir,
As you are aware, the Ph.D studentship of Debashish Kar ( Roll No : 512CE1010) of Civil
Engineering Department has ended on 22.04.2021. Shri Kar was allowed extension of
studentship till 31st Dec 2021  for various reasons cited by him.

He is delivering his synopsis seminar on 30th December, 2021. As he needs more time for
final revision and subsequent processing of his documents in our Institute, he has requested
for another extension of his studentship till 31.03.2022 by enabling him to submit his PhD
thesis. I have just forwarded the request letter of the student by email to Dean (AC) to put
up to the upcoming Senate on 27.12.2021 AN for consideration. As you were not in station,
your recommendation as Chairman of DSC could not be taken. I request you to please recommend
the extension of studentship through reply email for possible requirement by the Senate.

Thanking you and with regards,

Sincerely,

Prof. Mahabir Panda
Department of Civil Engg.
NIT Rourkela, Odisha, India 769008
Ph. 91-661-2462312 (O)
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Fwd: Request for Extension of Ph.D studentship of Debashish Kar (Roll No : 512CE1010)

From : Prof. Mahabir Panda <mpanda@nitrkl.ac.in>   Sat, Dec 25, 2021 10:23 PM
Subject : Fwd: Request for Extension of Ph.D studentship of Debashish Kar (Roll No :   ⌀1 attachment
512CE1010)
To : Bamadev Acharya <acharyab@nitrkl.ac.in>

Sir,
Forwarding to your personal email id for necessary action please as your acad.res mail id is
bouncing back.

Regards,
Sincerely,

Prof. Mahabir Panda
Department of Civil Engg.
NIT Rourkela, Odisha, India 769008
Ph. 91-661-2462312 (O)

----- Forwarded Message -----
From: "Prof. Mahabir Panda" <mpanda@nitrkl.ac.in>
To: "Animesh Biswas" <director@nitrkl.ac.in>, "REGISTRAR REGISTRAR-NIT,RKL"
<registrar@nitrkl.ac.in>, "DEAN-AC DEAN" <dean-ac@nitrkl.ac.in>, "Academic (Research
Scholars' Unit)" <acad.res@nitrkl.ac.in>
Sent: Saturday, December 25, 2021 10:21:24 PM
Subject: Request for Extension of Ph.D studentship of Debashish Kar (Roll No : 512CE1010)

Sir/Madam,
The Ph.D studentship of Debashish Kar (Roll No : 512CE1010) of Civil Engineering Department
has ended on 22.04.2021. Shri Kar was allowed extension of studentship till 31st Dec 2021
 for various reasons cited by him.
He is delivering his synopsis seminar on 30th December, 2021. As he needs more time for
final revision and subsequent processing of his documents, he has requested for another
extension of his studentship till 31.03.2022 by enabling him to submit his PhD thesis.
I request you to kindly put up to the upcoming Senate on 27.12.2021, the request of the
studentship as above (scanned copy of his request letter recommended by me and HOD,CE), for
consideration.

Thanking you and with regards,

Sincerely,

Prof. Mahabir Panda
Supervisor
Department of Civil Engg.
NIT Rourkela, Odisha, India 769008
Ph. 91-661-2462312 (O)

— **Extension date request letter for phd thesis submission.Debashish Kar Roll No 512CE1010.pdf**
211 KB

To

<div style="text-align:right">Dt: 25/12/2021</div>

The Dean (Academic)

NIT Rourkela

Sub: Request for Extension of studentship.
(Through proper channel)

Respected Madam,

With due respect, it is to state that I am a PhD. Student of Civil Engineering department of NIT, Rourkela. My studentship ended on 22.04.2021 and I have already been kindly permitted for extension of studentship till 31st Dec 2021 as my fathersuddenly died and thereafter, I as elder son had to streamline all household responsibilities and had to take care of my ailing mother (aged 74) with old age related health issues amidst Covid-19 pandemic.

My synopsis seminar is on coming 30th December, 2021. I have finished the overall thesis drafting, butsome thorough revision in terms of English writing/formatting and technicality is required for the final time for which I request you to kindly permit me some more time.

Therefore considering my above problems, I request you to kindly grant me another extension of my studentship till31.03.2022for which I shall be grateful to the Institute authorities. I assure you that I will submit my final thesis within the revised deadline.

Thanking you and with my best regards.

<div style="text-align:right">Yours faithfully,

Debashish Kar

DebashishKar
PhD. Student,
Dept. of Civil Engineering,
NIT Rourkela.
Mob no: 9437299305</div>

Rourkela
25.12.2021

Recommended

M. Panda, Supervisor
25/12/2021

Recommended

25/12/2021

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